This document gives pertinent information concerning the reissuance of the Virginia Pollutant Discharge Elimination System (VPDES) permit listed below. This permit is being processed as a Minor, Industrial permit. The industrial wastewater and stormwater discharges result from the operation of a bulk petroleum fuel storage and distribution center. This permit action consists of updating the proposed effluent limits to reflect the current Virginia Water Quality Standards (effective January 6, 2011) and updating permit language as appropriate. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards (WQS) of 9VAC25-260-00 et seq.

1.	Facility Name and Mailing Address:	Fairfax Terminal Complex 9601 Colonial Avenue Fairfax, VA 22031	SIC Code :	4226 – Petroleum and Chemical Bulk Stations and Terminals for Hire
	Facility Location:	9601 Colonial Avenue Fairfax, VA 22031	County:	Fairfax
	Facility Contact Name:	Mr. Mike Younce	Telephone Number:	(703) 503-3687
	Facility E-mail Address:	myounce@buckeye.com		
2.	Permit No.:	VA0001872	Expiration Date of previous permit:	December 28, 2014
	Other VPDES Permits associated with this facility:		None	
	Other Permits associated with this facility:		None	
	E2/E3/E4 Status:	Not Applicable (NA)		
3.	Owner Name:	Joint Basin Corporation		
	Owner Contact/Title:	Mr. Mike Younce / President	Telephone Number:	(703) 503-3687
	Owner E-mail Address:	myounce@buckeye.com		
4.	Application Complete Date:	September 15, 2014		
	Permit Drafted By:	Susan Mackert	Date Drafted:	July 24, 2015
	Draft Permit Reviewed By:	Alison Thompson	Date Reviewed:	July 27 – 28, 2015
	Public Comment Period :	Start Date: October 3, 2015	End Date:	November 2, 2015

5. Receiving Waters Information:

Receiving Stream Name :	Daniels Run, UT	Stream Code:	1-XIV
Drainage Area at Outfall:	<5 square miles*	River Mile:	0.18
Stream Basin:	Potomac River	Subbasin:	Potomac River
Section:	7	Stream Class:	III
Special Standards:	b	Waterbody ID:	VAN-A15R
7Q10 Low Flow:	0 MGD	7Q10 High Flow:	0 MGD
1Q10 Low Flow:	0 MGD	1Q10 High Flow:	0 MGD
30Q10 Low Flow:	0 MGD	30Q10 High Flow:	0 MGD
Harmonic Mean Flow:	0 MGD	30Q5 Flow:	0 MGD

*Staff determined that the drainage area for Outfall 001 is less than five square miles. Based on a drainage area of five square miles or less, critical flows will be equal to zero.

6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

X	State Water Control Law	___	EPA Guidelines
X	Clean Water Act	X	Water Quality Standards
X	VPDES Permit Regulation	X	Other: 9VAC25-120*
X	EPA NPDES Regulation		

* General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Test Waters

7. Licensed Operator Requirements: NA

8. Reliability Class: NA

9. Permit Characterization:

X	Private	___	Effluent Limited	___	Possible Interstate Effect
___	Federal	X	Water Quality Limited	___	Compliance Schedule Required
___	State	X	Whole Effluent Toxicity Program Required	___	Interim Limits in Permit
___	WTP	___	Pretreatment Program Required	___	Interim Limits in Other Document
___	TMDL	X	e-DMR Participant		

10. Wastewater Sources and Treatment Description:

The Joint Basin Corporation consists of four companies that operate petroleum product distribution terminals on Colonial Avenue in Fairfax, Virginia. The four companies which comprise the Joint Basin Corporation are Buckeye Terminals, LLC, Citgo Petroleum Corporation, Motiva Enterprises, LLC, and TransMontaigne, Incorporated. The terminals receive product from the Colonial Pipeline which is then stored in numerous above ground storage tanks (ASTs) located within diked areas of the four properties. Final product is distributed by tanker truck and via the Colonial Pipeline.

Outfall 001 (Stormwater Impoundment Basin)
The construction of a stormwater impoundment basin was originally requested by the City of Fairfax as a required safety objective for the terminal complex. The stormwater impoundment basin, which was completed in 1969, was designed to capture stormwater runoff from the terminal complex that would otherwise drain directly into Daniels Run. Under normal conditions, the stormwater impoundment basin continuously discharges via a concrete weir to an unnamed tributary to Daniels Run. The permit application further divides stormwater flow to the stormwater impoundment basin in to two major groups: terminal sources and non-terminal sources.

- Terminal sources include stormwater flow from each of the four terminals. Each terminal is responsible for the operation and maintenance of the equipment and best management practices on their respective properties. A summary of structural and non-structural stormwater control measures is found as Attachment 1. An additional terminal source includes stormwater runoff from Colonial Avenue which flows in to the stormwater impoundment basin after passing through culverts along Colonial Avenue and through the western portion of the Citgo property.

- Non-terminal sources include stormwater runoff from a residential area south and west of the terminal complex, the Army Navy Country Club golf course, Pickett Road and several commercial businesses located east of Pickett Road.

Internal Outfall 101

Internal Outfall 101 receives flow from an oil-water separator associated with the Buckeye terminal. This outfall discharges to the stormwater impoundment basin with ultimate discharge via Outfall 001.

Internal Outfall 102

Internal Outfall 102 receives flow from an oil-water separator associated with the TransMontaigne terminal. This outfall discharges to the stormwater impoundment basin with ultimate discharge via Outfall 001.

Internal Outfall 103

Internal Outfall 103, which is located on the TransMontaigne terminal property, receives stormwater flow from the TransMontaigne property. Internal Outfall 103 typically remains closed, but is utilized when needed to handle discharges from heavy rain events. During a site visit conducted on September 15, 2014, it was noted that when opened, Internal Outfall 103 flows to the oil-water separator associated with the TransMontaigne terminal and discharges via Internal Outfall 102.

Joint Basin Corporation has requested that Internal Outfall 103 be removed with this reissuance. Given this outfall does not discharge directly to the stormwater impoundment basin, but rather first to Internal Outfall 102, it is staff's best professional judgement that Internal Outfall 103 be removed with this reissuance. Staff believes there is no reasonable potential for the removal of this outfall to create any instream excursion of any applicable State narrative or numerical Water Quality Standard.

Internal Outfall 106

This outfall addresses the discharges from hydrostatic test waters associated with any of the tanks with the terminal complex to the stormwater impoundment basin. Based on correspondence with the facility's consultant (Groundwater and Environmental Services, Incorporated) subsequent to the receipt of the permit application, it was noted that Motiva has already obtained coverage under the *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests* (9VAC25-120 et seq.). Joint Basin Corporation then requested that this outfall be removed with this reissuance noting that if a hydrostatic test is required, they will obtain coverage under *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests.*

Given this discharge source would continue to be covered under another VPDES permit, it is staff's best professional judgement that Internal Outfall 106 be removed with this reissuance. Staff believes there is no reasonable potential for the removal of this outfall to create any instream excursion of any applicable State narrative or numerical Water Quality Standard.

Stomwater Outfall 901

This outfall addresses stormwater discharges from the stormwater impoundment basin via the same concrete weir associated with Outfall 001. Because the stormwater impoundment basin also receives flow from industrial wastewater sources such as hydrostatic testing waters, a discrete discharge of stormwater is not possible. Upon further consideration, it is staff's best professional judgement that Stormwater Outfall 901 be removed with this reissuance. Staff believes there is no reasonable potential for the removal of this outfall to create any instream excursion of any applicable State narrative or numerical Water Quality Standard.

See Attachment 2 for flow schematics and outfall locations.

See Attachment 3 for the NPDES Permit Rating Worksheet.

TABLE 1 – Outfall Description				
Outfall Number	**Discharge Sources**	**Treatment**	**Flow**	**Outfall Latitude and Longitude***
001	Industrial Wastewater/Stormwater**	Sedimentation	0.10 MGD***	38° 51′ 02.22″ N 77° 16′ 41.81″ W
101	Industrial Wastewater/Stormwater	Oil-Water Separator	See Attachment 2	38° 50′ 51.20″ N 77° 16′ 44.92″ W
102	Industrial Wastewater/Stormwater	Oil-Water Separator	See Attachment 2	38° 51′ 01.05″ N 77° 16′ 29.10″ W

*A component of the reissuance process involves a review of outfall coordinates and receiving streams by DEQ planning staff. Based on this review, Joint Basin Corporation was asked to confirm the outfall coordinates which were provided within the application package. The coordinates in Table 1 above have been updated to reflect Joint Basin Corporation's verified coordinates which may differ from those found within the permit application.

** While hydrostatic testing discharges will now be covered under a separate permit, the discharge from Outfall 001 may contain hydrostatic test water as a component.

*** Flow volume was confirmed with the facility's consultant subsequent to the application package being received. The flow shown above in Table 1 may differ from that found within the permit application.

11. Solids Treatment and Disposal Methods:

Fairfax Terminal is an existing bulk petroleum fuel storage and distribution center that does not treat domestic sewage and does not produce sewage sludge.

12. Monitoring Stations and Discharges in Vicinity of Discharge:

The monitoring stations and facilities listed below are either located in or discharge to the following waterbody: VAN-A15R.

TABLE 2 – Monitoring Stations and Discharges	
1aACO014.57	DEQ biological monitoring station at Route 620 (Braddock Road).
1aACO021.28	DEQ ambient water quality monitoring station at Route 237 (Pickett Road).
1aACO021.70	DEQ ambient water quality monitoring station at Old Lee Highway.
VA0001945	Kinder Morgan Southeast Terminals, LLC (Accotink Creek, UT)
VA0001988	Kinder Morgan Southeast Terminals LLC-Newington 2 (Accotink Creek, UT)
VA0002283	Motiva Enterprises, LLC – Fairfax (Crook Branch)
VAG250126	AT&T Oakton Office Park (Accotink Creek, UT)
VAG406519	Margaret Bardwell Residence (Accotink Creek, UT)
VAG750224	Enterprise Rent A Car (Calamo Branch, UT)
VAG750226	Enterprise Rent A Car (Accotink Creek, UT)
VAG750238	Ravensworth Collision Center (Accotink Creek, UT)
VAG110046	Newington Concrete (Accotink Creek, UT)
VAG110069	Virginia Concrete - Mid Atlantic Materials (Accotink Creek, UT)
VAR051042	SICPA Securink Corporation (Accotink Creek)
VAR051047	Fairfax County – Connector Bus Yard (Long Branch)
VAR051066	U.S. Postal Service – Merrifield (Long Branch, UT)

TABLE 2 – Monitoring Stations and Discharges (Continued)	
VAR051080	U.S. Army – Fort Belvoir (Accotink Creek)
VAR051565	Rolling Frito Lay Sales (Accotink Creek)
VAR051719	National Asphalt Paving Company (Accotink Creek)
VAR051770	Fairfax County – Jermantown Maintenance Facility (Accotink Creek)
VAR051771	Fairfax County – Newington Maintenance Facility (Long Branch)
VAR051772	Fairfax County – DVS – Alban Maintenance Facility (Field Lark Branch)
VAR051795	HD Supply (Accotink Creek)
VAR051863	United Parcel Service – Newington (Accotink Creek)
VAR052188	Milestone Metals (Long Branch, UT)
VAR052223	Newington Solid Waste Vehicle Facility (Long Branch, UT)

13. Material Storage:

A current list of materials stored on site was provided by the facility as part of the permit application package. This information is found as Attachment 4.

14. Site Inspection:

Performed by Beth Biller on September 15, 2014, with Susan Mackert and Lisa Janovsky in attendance. It is staff's best professional judgment that the application package received on July 3, 2014, is accurate and representative of actual site conditions. A memo for this site visit was not developed.

15. Receiving Stream Water Quality and Water Quality Standards:

a. Ambient Water Quality Data

This facility discharges to an unnamed tributary to Daniels Run that has not been monitored or assessed. Daniels Run (DAN) is located approximately 0.25 miles downstream from Outfall 001 and is not monitored be DEQ. Accotink Creek (ACO) is located approximately 0.86 miles downstream from Outfall 001. The following is the water quality summary for this segment of Accotink Creek, as taken from the 2012 Integrated Report:

Class III, Section 7, special standards - b.

DEQ monitoring stations located in this segment of Accotink Creek:

- Ambient water quality monitoring station 1aACO021.28, at Route 237 (Pickett Road), located approximately 0.95 mile downstream from Outfall 001
- Ambient water quality monitoring station 1aACO021.70, at Old Lee Highway, located approximately 1.0 mile downstream from Outfall 001

E. coli monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. The wildlife use is considered fully supporting. The fish consumption use was not assessed.

The aquatic life use was assessed as impaired using DEQ biological monitoring station 1aACO014.57, at Route 620 (located in a downstream segment).

b. 303(d) Listed Stream Segments and Total Maximum Daily Loads (TMDLs)

Table 3 - Impairment Information (2012 Integrated Report)

Waterbody Name	Impaired Use	Cause	Distance From Outfall	TMDL completed	Wasteload Allocation (WLA)	Basis for WLA	TMDL Schedule
Accotink Creek	Recreation	*E. coli*	0.86 miles	Upper Accotink Bacteria TMDL 05/31/2002	---	---	---
	Aquatic Life	Benthic Macroinvertebrates		---	---	---	2022
Lake Accotink	Fish Consumption	Mercury	9.1 miles	---	---	---	2022
		PCBs		---	---	---	2022

Significant portions of the Chesapeake Bay and its tributaries are listed as impaired on Virginia's 303(d) list of impaired waters for not meeting the aquatic life use support goal, and the 2012 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report indicates that much of the mainstem Bay does not fully support this use support goal under Virginia's Water Quality Assessment guidelines. Nutrient enrichment is cited as one of the primary causes of impairment. EPA issued the Bay TMDL on December 29, 2010. It was based, in part, on the Watershed Implementation Plans developed by the Bay watershed states and the District of Columbia.

The Chesapeake Bay TMDL addresses all segments of the Bay and its tidal tributaries that are on the impaired waters list. As with all TMDLs, a maximum aggregate watershed pollutant loading necessary to achieve the Chesapeake Bay's water quality standards has been identified. This aggregate watershed loading is divided among the Bay states and their major tributary basins, as well as by major source categories [wastewater, urban stormwater, onsite/septic agriculture, air deposition]. Fact Sheet Section 18.e provides additional information on specific nutrient monitoring for this facility to implement the provisions of the Chesapeake Bay TMDL.

The full planning statement is found in Attachment 5.

c. Receiving Stream Water Quality Criteria

Part IX of 9VAC25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream, an unnamed tributary to Daniels Run, is located within Section 7 of the Potomac River Basin, and classified as a Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

Attachment 6 details other water quality criteria applicable to the receiving stream.

Ammonia:

The freshwater, aquatic life Water Quality Criteria for Ammonia are dependent on the instream and/or effluent temperature and pH. The 90th percentile temperature and pH values are used because they best represent the critical design conditions of the receiving stream. Because neither instream nor effluent data is available for temperature, staff utilized a default temperature value of 25°C. It is staff's best professional judgement that a default pH value of 8.0 S.U. is suitable to calculate the ammonia water quality standards in lieu of calculating the 90th percentile pH value from the facility's actual discharge data as ammonia, as N, is generally not a parameter of concern due to the fact the discharge is industrial in nature and there is no reasonable potential to exceed the ammonia criteria. And as such, limit derivation is not warranted.

However, ammonia monitoring is included for Outfall 001 because the facility is located within a five mile distance upstream of a benthic impairment (see Attachment 5). See Section 15.a and 15.b of the Fact Sheet for impairment information.

The ammonia water quality standards calculations are shown in Attachment 6.

Metals Criteria:

The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (expressed as mg/L calcium carbonate). When the 7Q10 of the receiving stream is zero and no ambient data is available, effluent data for hardness can be used to determine the metals criteria. The hardness-dependent metals criteria in Attachment 6 are based on one effluent value of 23 mg/L.

d. Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9VAC25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, an unnamed tributary to Daniels Run, is located within Section 7 of the Potomac River Basin. This section has been designated with a special standard of "b".

Special Standard "b" (Potomac Embayment Standards) established effluent standards for all sewage plants discharging into Potomac River embayments and for expansions of existing plants discharging into non-tidal tributaries of these embayments. 9VAC25-415, Policy for the Potomac Embayments controls point source discharges of conventional pollutants into the Virginia embayment waters of the Potomac River, and their tributaries, from the fall line at Chain Bridge in Arlington County to the Route 301 Bridge in King George County. The Potomac Embayment Standards are not applied to this industrial discharge since the discharge does not contain the pollutants of concern in appreciable amounts.

16. Antidegradation (9VAC25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1because of the highly developed receiving stream watersheds in Fairfax County (Accotink Creek) and the District of Columbia metropolitan area (Potomac River), and the water quality impairments listed for Accotink Creek. The permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving streams, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows, 7Q10 and 1Q10, have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

a. Effluent Screening:

Effluent data obtained from the permit application, Attachment A, and Discharge Monitoring Report (DMR) forms has been reviewed and determined to be suitable for evaluation. The following pollutants require a Wasteload Allocation analysis: Copper, Lead, Nickel, and Zinc.

b. Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

Where:
- WLA = Wasteload allocation
- C_o = In-stream water quality criteria
- Q_e = Design flow
- Q_s = Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; 30Q10 for ammonia criteria; harmonic mean for carcinogen-human health criteria; and 30Q5 for non-carcinogen human health criteria)
- f = Decimal fraction of critical flow
- C_s = Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the C_o.

c. Effluent Limitations

9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9VAC25-31-230.D requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Outfall 001

The following discussion on the development of Benzene, Toluene, Ethylbenzene, Xylene (BTEX) and Naphthalene are taken from the *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests* (9VAC25-120 et seq.).

Benzene, Toluene, Ethylbenze, Xylenes (BTEX):

BTEX is used as an indicator of the compounds most likely found within gasoline. Based on the *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests*, 9VAC25-120 et seq., the analysis of BTEX is required for the discharge of water contaminated with gasoline.

During development of the 2013 *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests* DEQ staff reviewed DMR data from permittees with BTEX limitations. This review indicated that treatment systems being used by permittees typically reduce BTEX concentrations in the effluent to below quantifiable levels. Based on this review, it was staff's best professional judgement that the most stringent limitations were both achievable and more protective and should therefore be applied.

As such, the maximum limits shown below in Table 4 are proposed with this reissuance. The semi-annual monitoring frequency (1/6M) for BTEX shall be carried forward with this reissuance

TABLE 4 – BTEX Limitations

Parameter	Existing Limitation	Proposed Limitation
Benzene	50 µg/L	12 µg/L
Toluene	175 µg/L	43 µg/L
Ethylbenzene	320 µg/L	4.3 µg/L
Total Xylenes	33 µg/L	33 µg/L

Naphthalene:

Naphthalene is a component of gasoline and non-gasoline petroleum products, but its relative concentration is higher in products such as diesel and kerosene than in gasoline (Thomas & Delfino, 1991). The limit proposed for this permit is a water quality based limit that is to be applied at sites where contamination could possibly occur from diesel or other fuels that are not classified as gasoline.

During development of the 2013 *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests* DEQ staff reviewed DMR data from permittees with naphthalene limitations. This review indicated that treatment systems being used by permittees typically reduce naphthalene concentrations in the effluent to below quantifiable levels. Based on this review, it was staff's best professional judgement that the most stringent limitation of 8.9 µg/L was both achievable and more protective and should therefore be applied.

As such, a maximum limit of 8.9 µg/L shown below in Table 5 is proposed with this reissuance. The semi-annual monitoring frequency (1/6M) for naphthalene shall be carried forward with this reissuance.

TABLE 5 – Naphthalene Limitation

Parameter	Existing Limitation	Proposed Limitation
Naphthalene	10 µg/L	8.9 µg/L

Methyl-Tert-Butyl-Ether (MTBE):

Methyl-tertiary-butyl ether (MTBE) is a common additive in "reformulated" automotive gasolines. This oxygenate is supposed to reduce winter-time carbon monoxide levels in U.S. cities. It also is believed to be effective in reducing ozone and other toxics in the air year-round. If MTBE is used, it can be present in gasoline at up to 15% of the volume of the fuel. MTBE is an extremely hydrophilic compound. Unlike most petroleum products, it readily dissolves in water. The presence of MTBE in gasoline can increase the solubility of the fuel mixture in groundwater.

During development of the 2013 *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests* DEQ staff reviewed DMR data from permittees with MTBE limitations. This review indicated that MTBE was commonly found in the effluent of permittees thereby suggesting that treatment systems being used by permittees are not as effective at removing MTBE as they are at removing other petroleum constituents. Based on this review, it was staff's best professional judgement that an aquatic toxicity based limitation of 440 µg/L be applied.

As such, a maximum limit of 440 µg/L shown below in Table 6 is proposed with this reissuance. The semi-annual monitoring frequency (1/6M) for MTBE shall be carried forward with this reissuance.

TABLE 6 – MTBE Limitation

Parameter	Existing Limitation	Proposed Limitation
MTBE	1840 µg/L	440 µg/L

Total Petroleum Hydrocarbons:

The TPH maximum limit of 15 mg/L shall be carried forward with this permit reissuance. The limit is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater discharged without a visible sheen is generally expected to meet this effluent limitation. The monthly monitoring frequency (1/M) for TPH shall be carried forward with this reissuance.

Copper:

An analysis of the data provided with the application indicates the need for a daily maximum copper and an average monthly copper limit of 3.6 µg/L. These limits were derived based on one datum point and as such, it is staff's best professional judgement that monitoring for dissolved copper be implemented with this reissuance in lieu of a limit. A semi-annual monitoring frequency (1/6M) is proposed. Please see Attachment 7 for derivation of the limits.

Lead:

An analysis of the data provided with the application indicates no limit is necessary (Attachment 7). While a limit is not warranted, lead was noted as being present in the discharge from Outfall 001. As such, it is staff's best professional judgement that monitoring be implemented for dissolved lead with this reissuance. A semi-annual monitoring frequency (1/6M) is proposed.

Nickel:

An analysis of the data provided with the application indicates no limit is necessary (Attachment 7). While a limit is not warranted, nickel was noted as being present in the discharge from Outfall 001. As such, it is staff's best professional judgement that monitoring be implemented for dissolved nickel with this reissuance. A semi-annual monitoring frequency (1/6M) is proposed.

Zinc:

An analysis of the data provided with the application indicates no limit is necessary (Attachment 7). While a limit is not warranted, zinc was noted as being present in the discharge from Outfall 001. As such, it is staff's best professional judgement that monitoring be implemented for zinc with this reissuance. A semi-annual monitoring frequency (1/6M) is proposed.

Total Suspended Solids (TSS):

The TSS maximum limit of 60 mg/L shall be carried forward with this permit reissuance. The limit is included with the permit to ensure proper operation and maintenance of the stormwater impoundment basin. The limit was derived from requirements at other industrial activities providing sedimentation of storm water runoff. The monthly monitoring frequency (1/M) for TPH shall be carried forward with this reissuance.

pH:

pH limitations are set at the water quality criteria. The monthly monitoring frequency (1/M) for pH shall be carried forward with this reissuance.

Total Hardness:

The Water Quality Criteria for some metals are dependent on the effluent hardness (expressed as mg/L calcium carbonate). Because staff has proposed monitoring for dissolved metals, it is staff's best professional judgement that hardness monitoring also be implemented with this issuance. A semi-annual monitoring frequency (1/6M) is proposed.

Pesticides:

Since limits for pesticides are not routinely placed in permits for storm water discharges, the facility is required to utilize Best Management Practices as part of the Storm Water Pollution Prevention Plan (SWPPP) to ensure that there is no contamination of storm water runoff that impacts State waters from the use of pesticides at the facility.

2) Outfall 101

Total Petroleum Hydrocarbons:

The TPH maximum limit of 15 mg/L shall be carried forward with this permit reissuance. The limit is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater discharged without a visible sheen is generally expected to meet this effluent limitation. The quarterly monitoring frequency (1/3M) for TPH shall be carried forward with this reissuance.

3) Outfall 102

Total Petroleum Hydrocarbons:

The TPH maximum limit of 15 mg/L shall be carried forward with this permit reissuance. The limit is based on the ability of simple oil-water separator technology to recover free product from water. Wastewater discharged without a visible sheen is generally expected to meet this effluent limitation. The quarterly monitoring frequency (1/3M) for TPH shall be carried forward with this reissuance.

d. Nutrient Monitoring

EPA's Chesapeake Bay TMDL (December 29, 2010) included wasteload allocations for VPDES permitted industrial stormwater facilities as part of the regulated stormwater aggregate load. EPA used data submitted by Virginia with the Phase I Chesapeake Bay TMDL Watershed Implementation Plan (WIP), including the number of industrial stormwater permits per county and the number of urban acres regulated by industrial stormwater permits, as part of their development of the aggregate load. Aggregate loads for industrial stormwater facilities were appropriate because actual facility loading data were not available to develop individual facility wasteload allocations. Virginia estimated the loadings from industrial stormwater facilities using actual and estimated facility acreage information, and Total Phosphorus (TP), Total Nitrogen (TN), and Total Suspended Solids (TSS) loading values from the Northern Virginia Planning District Commission (NVPDC) Guidebook for Screening Urban Nonpoint Pollution Management Strategies, prepared for the Metropolitan Washington Council of Governments (November, 1979).

1) Outfall 001

Nutrients:

To protect the Water Quality Standards of the Chesapeake Bay and to address the downstream benthic impairment in Accotink Creek, monitoring for Nitrate+Nitrite, Total Kjeldahl Nitrogen, Total Nitrogen, and Total Phosphorus are proposed for this reissuance. Actual facility area information, and the TP, TN and TSS data collected will be used by the Board to quantify the nutrient and sediment loads from VPDES permitted industrial stormwater facilities, and will be submitted to EPA to aid them in further refinements to their Chesapeake Bay TMDL model. The loading information will also be used by the board to determine any additional load reductions needed for industrial stormwater facilities for the next reissuance of this permit. A semi-annual monitoring (1/6M) is proposed with this reissuance. See Part III of the permit for additional calculation and reporting requirements.

e. Effluent Limitations and Monitoring Summary

Limits were established for Total Suspended Solids, pH, Total Petroleum Hydrocarbons, BTEX, MTBE, and Naphthalene.

Monitoring and/or reporting was established for Total Kjeldahl Nitrogen, Nitrate+Nitrite, Total Nitrogen, Total Phosphorus, Dissolved Copper, Dissolved Lead, Dissolved Nickel, Dissolved Zinc, Total Hardness and Chronic Toxicity.

The limits for BTEX, MTBE, and Naphthalene are in accordance with 9VAC25-120, *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests.*

The limits for Total Petroleum Hydrocarbons are based on the ability of simple oil-water separator technology to recover free product from water and Best Professional Judgement.

The limits for Total Suspended Solids are based on Best Professional Judgement.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

18. Antibacksliding:

a. Outfall 103

During a site visit conducted on September 15, 2014, it was noted that when opened, Internal Outfall 103 flows to the oil-water separator associated with the TransMontaigne terminal, actually discharging to the stormwater impoundment basin via Internal Outfall 102. Staff believes there is no reasonable potential for the removal of this outfall to create any instream excursion of any applicable State narrative or numerical Water Quality Standard given the TPH limitation at Internal Outfall 102 is more stringent than the TPH limit currently applied at Internal Outfall 103.

b. Outfall 106

This outfall addresses the discharges from hydrostatic test waters associated with any of the tanks with the terminal complex to the stormwater impoundment basin. Staff believes there is no reasonable potential for the removal of this outfall to create any instream excursion of any applicable State narrative or numerical Water Quality Standard given this discharge source would continue to be covered under another VPDES permit, the *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests* (9VAC25-120 et seq.).

c. Outfall 901

This outfall addresses stormwater discharges from the stormwater impoundment basin via the same concrete weir associated with Outfall 001. Staff believes there is no reasonable potential for the removal of this outfall to create any instream excursion of any applicable State narrative or numerical Water Quality Standard given there is no discrete discharge of stormwater from the stormwater impoundment basin and the monitoring requirements established at Outfall 001 are more stringent than those currently established for Outfall 901.

19a. Effluent Limitations/Monitoring Requirements: Outfall 001 (Stormwater Impoundment Basin)

Average Flow: 0.10 MGD
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENT	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/M	Estimate
pH	2	NA	NA	6.0 S.U.	9.0 S.U.	1/M	Grab
Total Suspended Solids (TSS)	1	NA	NA	NA	60 mg/L	1/M	Grab
Total Petroleum Hydrocarbons(TPH)[a]	1	NA	NA	NA	15 mg/L	1/M	Grab
Benzene[b]	3	NA	NA	NA	12 µg/L	1/6M	Grab
Toluene[b]	3	NA	NA	NA	43 µg/L	1/6M	Grab
Ethylbenzene[b]	3	NA	NA	NA	4.3 µg/L	1/6M	Grab
Total Xylenes[b]	3	NA	NA	NA	33 µg/L	1/6M	Grab
Naphthalene	3	NA	NA	NA	8.9 µg/L	1/6M	Grab
MTBE[b]	3	NA	NA	NA	440 µg/L	1/6M	Grab
Total Nitrogen[c]	1	NA	NA	NA	NL (mg/L)	1/6M	Calculated
Total Kjeldahl Nitrogen (TKN)	1	NA	NA	NA	NL (mg/L)	1/6M	Grab
Nitrate+Nitrite (NO_2+NO_3)	1	NA	NA	NA	NL (mg/L)	1/6M	Grab
Total Phosphorus	1	NA	NA	NA	NL (mg/L)	1/6M	Grab
Copper, Dissolved[d]	1	NA	NA	NA	NL (µg /L)	1/6M	Grab
Lead, Dissolved[d]	1	NA	NA	NA	NL (µg /L)	1/6M	Grab
Nickel, Dissolved[d]	1	NA	NA	NA	NL (µg /L)	1/6M	Grab
Zinc, Dissolved[d]	1	NA	NA	NA	NL (µg /L)	1/6M	Grab
Hardness, Total (as $CaCO_3$)[d]	1	NA	NA	NA	NL (mg/L)	1/6M	Grab
Chronic Toxicity – *C. dubia*	1	NA	NL (TU_c)	NA	NA	1/3M	24H-C
Chronic Toxicity – *P. promelas*	1	NA	NL (TU_c)	NA	NA	1/3M	24H-C

The basis for the limitations codes are:
1. Best Professional Judgement
2. Water Quality Standards
3. 9VAC25-120

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
S.U. = Standard units.

1/M = Once every month.
1/3M = Once every three months.
1/6M = Once every six months.

1/3M = The quarterly monitoring periods shall be January 1 - March 31, April 1 - June 30, July 1 - September 30 and October 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).

1/6M = The semiannual monitoring periods shall be January through June and July through December. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (July 10 and January 10, respectively).

24H-C A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 24 hour period. Where discrete sampling is employed, the permittee shall collect a minimum of twenty-four (24) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of twenty-four (24) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by ≥10% or more during the monitored discharge.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Total Petroleum Hydrocarbons Requirements:

a. Total Petroleum Hydrocarbons (TPH) is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015 for gasoline and diesel range organics, or by EPA SW 846 Methods 8260 Extended and 8270 Extended.

BTEX and MTBE Requirements:

b. BTEX and MTBE shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136) or EPA SW 846 Method 8021B (1996).

Nutrient Requirements:

c. Total Nitrogen is the sum of Total Kjeldahl Nitrogen and NO_2+NO_3 and shall be calculated from the results of those tests.

Metals and Total Hardness Requirements:

d. Samples for metals and hardness shall be collected concurrently.

19b. Effluent Limitations/Monitoring Requirements: Outfall 101 (Buckeye Oil-Water Separator)

Average Flow: See Attachment 2
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENT	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/3M	Estimate
Total Petroleum Hydrocarbons(TPH)[a]	1	NA	NA	NA	15 mg/L	1/3M	Grab

The basis for the limitations codes are:
1. Best Professional Judgement

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 - March 31, April 1 - June 30, July 1 - September 30 and October 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).
Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.
Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Total Petroleum Hydrocarbons Requirements:

a. Total Petroleum Hydrocarbons (TPH) is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015 for gasoline and diesel range organics, or by EPA SW 846 Methods 8260 Extended and 8270 Extended.

19c. Effluent Limitations/Monitoring Requirements: Outfall 102 (TransMontaigne Oil-Water Separator)

Average Flow: See Attachment 2
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS			MONITORING REQUIREMENT		
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	1/3M	Estimate
Total Petroleum Hydrocarbons(TPH)[a]	1	NA	NA	NA	15 mg/L	1/3M	Grab

The basis for the limitations codes are:
1. Best Professional Judgement

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
1/3M = Once every three months.

1/3M = The quarterly monitoring periods shall be January 1 - March 31, April 1 - June 30, July 1 - September 30 and October 1 - December 31. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (April 10, July 10, October 10 and January 10, respectively).
Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.
Grab = An individual sample collected over a period of time not to exceed 15-minutes.

Total Petroleum Hydrocarbons Requirements:
a. Total Petroleum Hydrocarbons (TPH) is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method 8015 for gasoline and diesel range organics, or by EPA SW 846 Methods 8260 Extended and 8270 Extended.

20. Polychlorinated Biphenyls (PCBs):

Lake Accotink, which is located approximately 9.1 miles downstream from Outfall 001, is listed with a PCB impairment. In support of the PCB TMDL that is scheduled for development by 2022, this facility is a candidate for PCB monitoring. The SIC code for this facility (5171) is not specifically identified in the PCB Monitoring Guidance (09-2001) as a facility type that is subject to PCB monitoring, however the guidance allows other industrial facilities to be identified for monitoring based on additional information or staff recommendations. Total PCB results have been generated from sampling conducted at VPDES permitted facilities statewide since 2009. PCB data from Petroleum Bulk Station and Terminal facilities (5171) indicate that effluent from these facilities has potential to contain PCBs in concentrations greater than the Virginia water quality criteria (640 pg/L). Based on this information, DEQ staff recommends that this facility perform low-level PCB monitoring during the upcoming permit cycle. It is recommended that this facility collect one sample using EPA Method 1668, which is capable of detecting low-level concentrations for all 209 PCB congeners. PCB data generated using Method 1668 revisions A, B, and C are acceptable; however, data generated using version A is preferred.

21. Other Permit Requirements:

a. Permit Section Part I.B of the permit contains quantification levels and compliance reporting instructions. 9VAC25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9VAC25-31-220.D requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

b. Permit Section Part I.C details the requirements for Whole Effluent Toxicity (WET) Program.

The VPDES Permit Regulation at 9VAC25-31-220.D.1.a-d. requires limitations in permits to provide for and ensure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act. Limitations must control all pollutants or pollutant parameters which the Board determines are or may be discharged at a level which will cause, have the reasonable potential to cause or contribute to an excursion above any Virginia water quality standard, including narrative criteria. The determination whether a discharge causes or contributes to an instream excursion above a narrative or numeric criteria shall utilize procedures which account for existing controls on sources of pollution, variability of the pollutant, species sensitivity and dilution of the effluent in the receiving stream. If it is determined that a reasonable potential exists to cause or contribute to an instream excursion of narrative criterion of the water quality standard, the permit must contain effluent limits for whole effluent toxicity. However, limits may not be necessary when it is demonstrated that chemical-specific limits are sufficient to attain and maintain applicable numeric and narrative water quality standards.

A WET Program is imposed for industrial facilities based on the facility's Standard Industrial Classification (SIC) code, instream waste concentration (IWC) and/or those required by the Board based on effluent variability, compliance history, existing treatment processes and/or the receiving stream characteristics. Bulk terminal facilities have been determined to have the potential for toxicity or instream impacts.

WET results obtained during the previous permit term indicated potential toxicity to the test species. See Attachment 8 for a summary of all past test results. Attachment 8 details the statistical evaluation of the previous WET results indicating that a limit may be warranted. However, in lieu of imposing a WET limit with this reissuance, it is staff's best professional judgement to increase the testing frequency regime for a minimum of one year while the facility investigates the possible cause(s) of the failed test results in 2012 and 2013. The permittee shall, at a minimum, review activities at each terminal prior to these sample dates that may have impacted the quality of the discharge.

Concurrently, the permittee shall also develop protocols that will be implemented should future WET test failures occur. This report and proposed protocol shall be submitted to DEQ-NRO staff for review and approval prior to the end of the first year quarterly testing regime.

As stated above, the permittee will be required to conduct WET testing on a quarterly basis during the first year, at a minimum. The permittee may request, in writing, that the testing frequency be reduced to once a year after submittal of the first year's test results. A reduced testing frequency approval is contingent upon (1) no compliance endpoint exceedances during this initial quarterly testing regime and (2) DEQ-NRO staff approval of the above report and proposed protocol. Attachment 8 documents the calculated compliance endpoints that will be carried forward with this reissuance.

If any test results, including subsequent retests, indicate possible toxicity to the test species, the permittee may be required to conduct quarterly WET testing for the remainder of the permit term and/or this permit may be modified to include a WET limit; see Section 22.g. of this Fact Sheet

22. Other Special Conditions:

a. O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; VPDES Permit Regulation, 9VAC25-31-190.E and 40 CFR 122.41(e). The permittee shall maintain a current Operations and Maintenance (O&M) Manual. The permittee shall operate the facility in accordance with the O&M Manual and shall make the O&M Manual available to Department personnel for review upon request. Any changes in the practices and procedures followed by the permittee shall be documented in the O&M Manual within 90 days of the effective date of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.

b. Notification Levels. Required by VPDES Permit Regulation 9VAC-31-200A for all manufacturing, commercial, mining, and silvacultural discharges. The permittee shall notify the Department as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
   (a) One hundred micrograms per liter;
   (b) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;
   (c) Five times the maximum concentration value reported for that pollutant in the permit application; or
   (d) The level established by the Board.

2. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
   (a) Five hundred micrograms per liter;
   (b) One milligram per liter for antimony;
   (c) Ten times the maximum concentration value reported for that pollutant in the permit application; or
   (d) The level established by the Board.

c. Materials Handling/Storage. 9VAC25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.

d. Oil Storage Ground Water Monitoring Reopener. As this facility currently manages ground water in accordance with 9VAC25-90-10 et seq., Oil Discharge Contingency Plans and Administration Fees for Approval, this permit does not presently impose ground water monitoring requirements. However, this permit may be modified or alternately revoked and reissued to include ground water monitoring not required by the ODCP regulation.

e. No Discharge of Detergents, Surfactants, or Solvents to the Oil/Water Separators. This special condition is necessary to ensure that the oil/water separators' performance is not impacted by compounds designed to emulsify oil. Detergents, surfactants, and some other solvents will prohibit oil recovery by physical means.

f. PCB Monitoring. This special condition requires the permittee to conduct PCB monitoring using ultra-low level PCB analysis to support the development of the PCB TMDL for the fish consumption use impairment in Lake Accotink.

g. Whole Effluent Toxicity Identification.
The permittee shall investigate the Whole Effluent Toxicity (WET) compliance endpoint exceedances that were noted during the previous permit term. This shall include, but not be limited to, review of onsite activities, records and field notes that may have contributed or indicated that effluent quality may have been compromised. Additionally, the permittee shall also develop protocols that will be implemented should future WET test failures occur. This report and proposed protocol shall be submitted to DEQ-NRO for review and approval prior to the end of the first year quarterly testing regime. Should the report or WET testing results indicate the possibility of toxicity issues, the permittee may be required to conduct quarterly testing for the remainder of this permit and/or the permit may be modified to include a WET limit.

h. TMDL Reopener. This special condition is to allow the permit to reopened if necessary to bring it in compliance with any applicable TMDL that may be developed and approved for the receiving stream.

Permit Section Part II. Required by VPDES Regulation 9VAC25-31-190, Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

Permit Section Part III. Details Industrial Stormwater Management Requirements. Industrial storm water discharges may contain pollutants in quantities that could adversely affect water quality. Storm water discharges which are discharged through a conveyance or outfall are considered point sources and require coverage by a VPDES permit. The primary method to reduce or eliminate pollutants in storm water discharges from an industrial facility is through the use of best management practices (BMPs). Storm Water Management Plan requirements are derived from the VPDES General Permit for Storm Water Discharges Associated with Industrial Activity, 9VAC25-151 et seq.

23. Changes to the Permit from the Previously Issued Permit:

a. Special Conditions:

1. The O&M special condition has been revised to be consistent with current agency practice.
2. The Hydrostatic Testing special condition was removed with this reissuance. The permittee shall obtain coverage under the *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests* if hydrostatic testing is required.
3. The Water Quality Criteria Reopener special condition was removed with this reissuance as the facility has conducted monitoring in the three previous permit cycles.
4. The Water Quality Criteria Monitoring special condition was removed with this reissuance as the facility has conducted this monitoring in the three previous permit cycles.
5. A Whole Effluent Toxicity Identification special condition was added with this reissuance.
6. A PCB sampling special condition was added with this reissuance.

b. Monitoring and Effluent Limitations:

1. Monitoring for Total Kjeldahl Nitrogen, Nitrate+Nitrite, Dissolved Copper, Dissolved Lead, Dissolved Nickel, Dissolved Zinc, and Total Hardness has been added to Outfall 001.
2. Reporting of Total Nitrogen has been added to Outfall 001.
3. Outfall 103, and all associated requirements, has been removed from the permit.
4. Outfall 106, and all associated requirements, has been removed from the permit. Coverage shall be obtained under the *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests.*
5. Outfall 901, and all associated requirements, has been removed from the permit.
6. The Benzene limit was revised to 12 µg/L in accordance with 9VAC25-120, *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests.*
7. The Toluene limit was revised to 43 µg/L in accordance with 9VAC25-120, *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests.*
8. The Ethylbenzene limit was revised to 4.3 µg/L in accordance with 9VAC25-120, *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests.*
9. The Naphthalene limit was revised to 8.9 µg/L in accordance with 9VAC25-120, *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests.*
10. The MTBE limit was revised to 440 µg/L in accordance with 9VAC25-120, *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests.*
11. Toxicity Monitoring Program (TMP) language has been changed to Whole Effluent Toxicity (WET) testing to be consistent with current agency practice.
12. WET testing requirements have been increased to quarterly for one year provided no exceedances are noted.
13. WET monitoring collection has been changed from a 24-hour flow proportioned composite to a 24-hour time weighted composite sample.

c. Other:

1. Stormwater language was updated to reflect that found within the 2014 – 2019 *General VPDES Permit for Storm Water Discharges Associated with Industrial Activity* and that there is not a discrete stormwater discharge.
2. The NPDES Permit Rating Worksheet reflects a score change from 79 to 73 with this reissuance. The change results from updating the flow at the facility and a correction to Factor 6 to indicate the facility discharges to the Chesapeake Bay.

24. Public Notice Information:

First Public Notice Date: October 2, 2015 Second Public Notice Date: October 9, 2015

Public Notice Information is required by 9VAC25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3853, susan.mackert@deq.virginia.gov. See Attachment 9 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

25. Additional Comments:

Previous Board Action(s): None

Staff Comments: The following discussion addresses items requested by Joint Basin Corporation in the permit application received on July 3, 2014. The permittee requested the following:

- The removal of Outfall 103 as a sampled internal outfall. Staff concurs and Internal Outfall 103 has been removed from the permit. See Section 10 of the Fact Sheet for additional discussion.
- Written approval for field testing of residual chlorine for Outfall 106 and revision of the maximum limit to match the required quantification limit. Outfall 106 has been removed from this permit and will now be addressed under the *General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests.* As such, this request is no longer applicable to the requirements of this permit. See Section 10 of the Fact Sheet for additional discussion.
- Revision of biological sample collection from a 24-hour flow proportioned composite to a 24-hour time weighted composite sample. This item has been approved. See Section 21.b of the Fact Sheet for additional discussion.
- Approval to collect stormwater samples approximately 24 hours after a measurable rain event to allow for the representative discharge to reach the outfalls. Outfall 901 has been removed from this permit. As such, this request is no longer applicable to the requirements of this permit. See Section 10 of the Fact Sheet for additional discussion.
- Duplicate use of Outfall 901 analytical data as a representative discharge for Outfall 001 reporting data when sampled in the same month. Outfall 901 has been removed from this permit. As such, this request is no longer applicable to the requirements of this permit. See Section 10 of the Fact Sheet for additional discussion.
- Update of the Stormwater Pollution Prevention Team to include Colonial Pipeline. If the Joint Basin Corporation wishes to include Colonial Pipeline as member of the Stormwater Pollution Prevention Team it is up to Joint Basin Corporation and Colonial Pipeline to agree to such an arrangement. Authorizing and/or determining specific members of a Stormwater Pollution Prevention Team is at the discretion of the permittee and does not require approval of DEQ.

Permittee Comments: Comments were received from the permittee. Those comments and staff's responses are found within the permit reissuance file.

Public Comment: No public comments were received.

Fact Sheet Attachments – Table of Contents

Joint Basin Corporation – Fairfax Terminal Complex
VA0001872

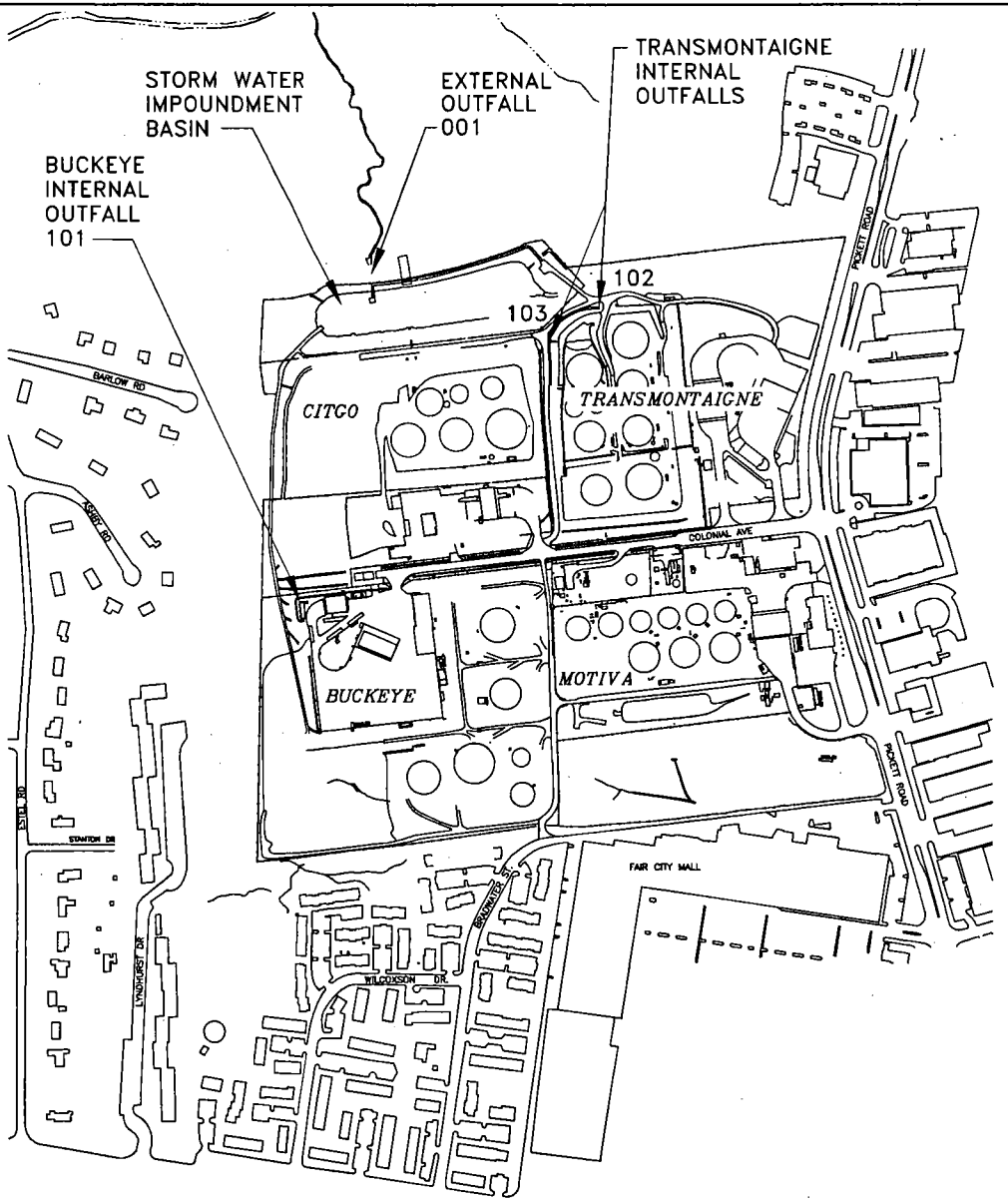
2015 Reissuance

STORM WATER RUNOFF STRUCTURAL AND NON-STRUCTURAL CONTROL MEASURES

Fairfax Terminal Complex
9601 Colonial Avenue
Fairfax, VA 22301

Outfall Number	Company	Control Measures	Codes from Table 2F-1
Structural			
001, 101, 901	**BUCKEYE**	Diked tank field areas, concrete runoff channels, loading rack canopy, oil/water separator, concrete holding vault, holding tanks	1U, 4A
001, 901	**CITGO**	Diked tank field areas, concrete runoff channels, loading rack canopy, oil/water separator, holding tanks	1U, 4A
001, 102, 103, 901	**TRANSMONTAIGNE**	Diked tank field areas, concrete runoff channels, loading rack canopy, oil/water separator, holding basin	1U, 4A
001, 901	**MOTIVA**	Storm drains, runoff channels	1U, 4A
Non-Structural			
001, 901	**BUCKEYE, CITGO, TRANSMONTAIGNE, MOTIVA**	Spill Prevention, Control, and Countermeasures Plans, employee training, visual inspections, preventative maintenance, good housekeeping measures. Additionally, all facilities operate under the City of Fairfax Department of Fire and Rescue, Office of Code Enforcement oversight (safety attendant present during locating, monthly high-level alarm inspections, and annual hazardous use permit inspections).	NA

Notes:
1. NA = Not applicable



DRAFTED BY: W.A.W. (N.J.)	EXTERNAL AND INTERNAL STORMWATER OUTFALL LOCATIONS
CHECKED BY: JL	JOINT BASIN CORPORATION FAIRFAX TERMINAL COMPLEX 9601 COLONIAL AVENUE FAIRFAX, VIRGINIA
REVIEWED BY: GR	
NORTH	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113
	SCALE IN FEET (APPROXIMATE) 0 400 / DATE 6-12-14 / FIGURE 3-3

Attachment 2
Page 1 of 5

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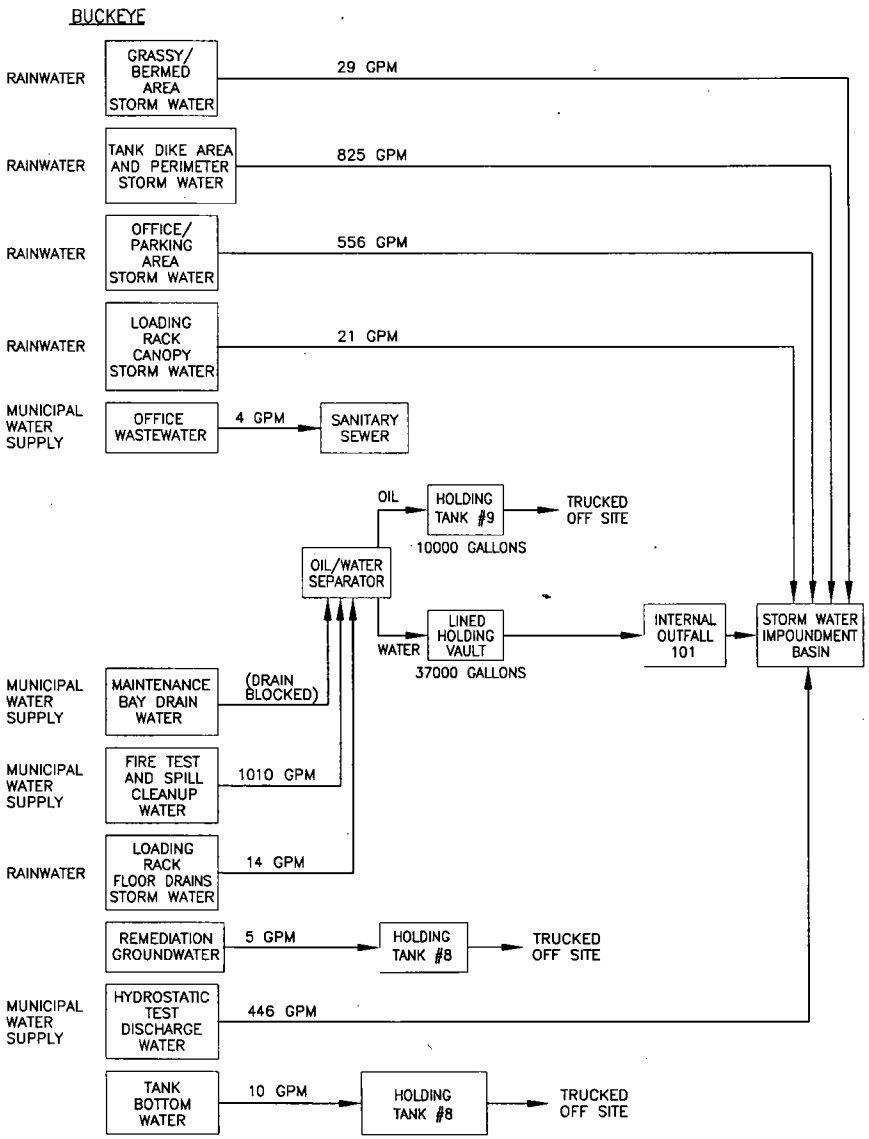
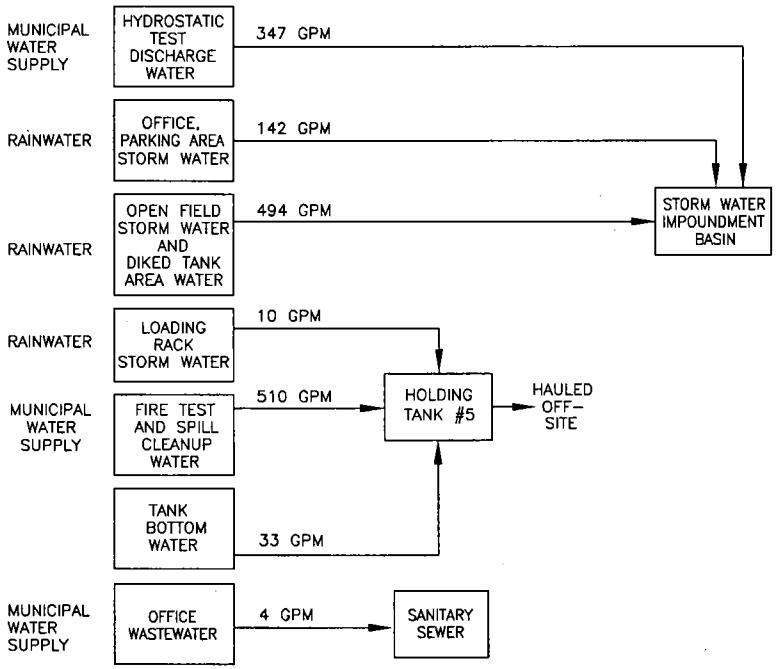


DRAFTED BY: W.A.W. (N.J.)	BUCKEYE WATER MANAGEMENT SCHEMATIC DIAGRAM
CHECKED BY: JL	JOINT BASIN CORPORATION FAIRFAX TERMINAL COMPLEX 9601 COLONIAL AVENUE FAIRFAX, VIRGINIA
REVIEWED BY: GR	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113
	NOT TO SCALE / DATE 6-12-14 / FIGURE 242

Attachment 2
Page 2 of 5

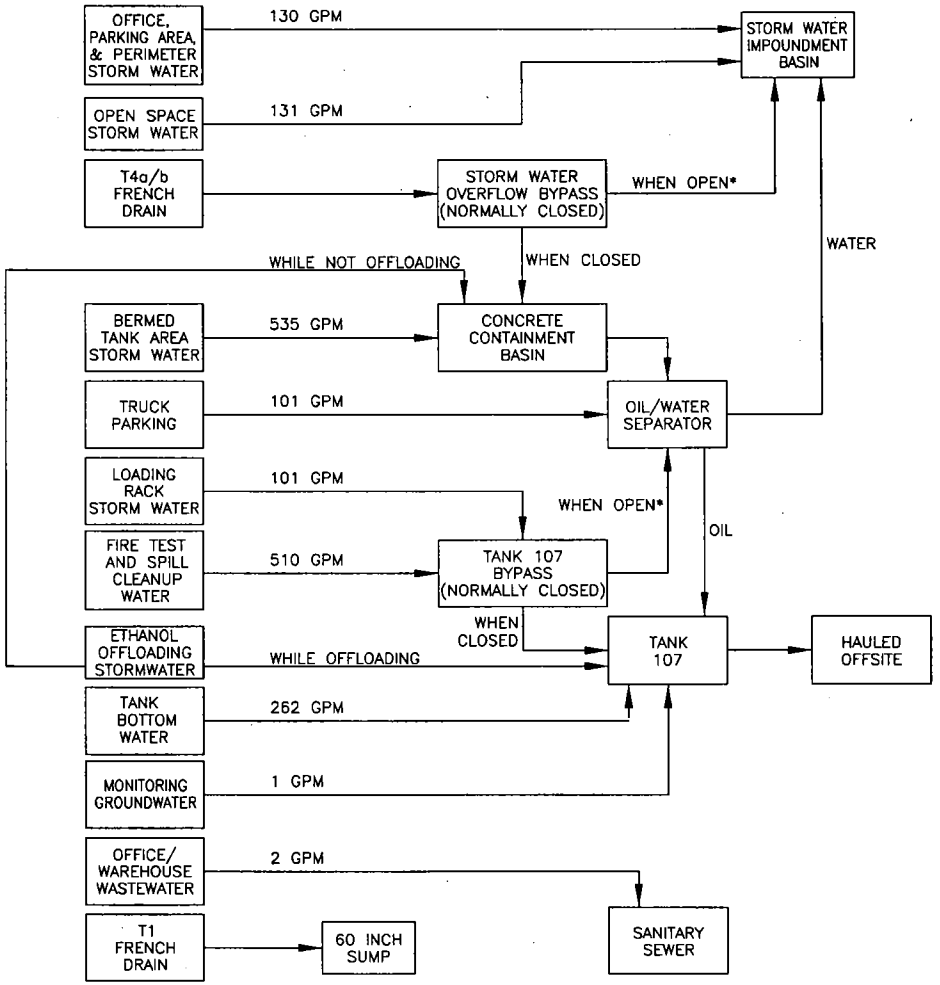
M:\Graphics\0400-Crofton\Misc\Joint Basin Corporation\JBC- fairfax DISCHARGE FLOW DIA.dwg 6/12/2014 9:34:00 AM, WWesterfund

CITGO



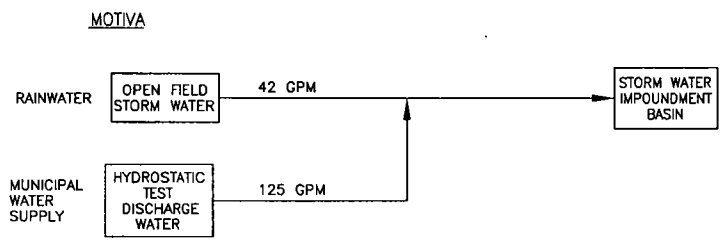
DRAFTED BY: W.A.W. (N.J.)	CITGO WATER MANAGEMENT SCHEMATIC DIAGRAM
CHECKED BY: JL	JOINT BASIN CORPORATION FAIRFAX TERMINAL COMPLEX 9601 COLONIAL AVENUE FAIRFAX, VIRGINIA
REVIEWED BY: GR	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113
	NOT TO SCALE / DATE 6-12-14 / FIGURE 2-3

TRANSMONTAIGNE



* NOTE: THIS BYPASS WILL ONLY BE USED AS AN EMERGENCY DISCHARGE DURING A SEVERE RAINFALL EVENT.

DRAFTED BY: E.M.E. (N.J.)	TRANSMONTAIGNE STORM WATER IMPOUNDMENT BASIN SCHEMATIC DIAGRAM
CHECKED BY: JL	JOINT BASIN CORPORATION FAIRFAX TERMINAL COMPLEX 9601 COLONIAL AVENUE FAIRFAX, VIRGINIA
REVIEWED BY: GR	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113
	NOT TO SCALE / DATE 6-24-14 / FIGURE 6



DRAFTED BY: W.A.W. (N.J.)	MOTIVA WATER MANAGEMENT SCHEMATIC DIAGRAM	
CHECKED BY: JL	JOINT BASIN CORPORATION FAIRFAX TERMINAL COMPLEX 9601 COLONIAL AVENUE FAIRFAX, VIRGINIA	
REVIEWED BY: GR	Groundwater & Environmental Services, Inc. 1350 BLAIR DRIVE, SUITE A, ODENTON, MD 21113	
	NOT TO SCALE	DATE 6-12-14 / FIGURE 2-5

M:\Graphics\0400-Crofton\Misc\Joint Basin Corporation\JBC- fairfax DISCHARGE FLOW DIA.dwg, 6/12/2014 9:36:11 AM, WWrestvund

NPDES PERMIT RATING WORK SHEET

[X] Regular Addition
[ ] Discretionary Addition
[ ] Score change, but no status Change
[ ] Deletion

VPDES NO. : VA0001872

Facility Name: Joint Basin – Fairfax Terminal Complex
City / County: Fairfax / Fairfax
Receiving Water: Daniels Run, UT
Waterbody ID: VAN-A15R

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power Plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rater

[ ] Yes; score is 600 (stop here) [X] NO; (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

[ ] YES; score is 700 (stop here)
[X] NO; (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary Sic Code: 5171 Other Sic Codes: _____ _____ _____

Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
[ ] No process waste streams	0	0	[ ] 3.	3	15	[ ] 7.	7	35
[ ] 1.	1	5	[ ] 4.	4	20	[X] 8.	8	40
[ ] 2.	2	10	[ ] 5.	5	25	[ ] 9.	9	45
			[ ] 6.	6	30	[ ] 10.	10	50

Code Number Checked: 8

Total Points Factor 1: 40

FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)			Code	Points
Type I:	Flow < 5 MGD	[ ]	11	0
	Flow 5 to 10 MGD	[ ]	12	10
	Flow > 10 to 50 MGD	[ ]	13	20
	Flow > 50 MGD	[ ]	14	30
Type II:	Flow < 1 MGD	[X]	21	10
	Flow 1 to 5 MGD	[ ]	22	20
	Flow > 5 to 10 MGD	[ ]	23	30
	Flow > 10 MGD	[ ]	24	50
Type III:	Flow < 1 MGD	[ ]	31	0
	Flow 1 to 5 MGD	[ ]	32	10
	Flow > 5 to 10 MGD	[ ]	33	20
	Flow > 10 MGD	[ ]	34	30

Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10 %	[ ]	41	0
	10 % to < 50 %	[ ]	42	10
	> 50%	[ ]	43	20
Type II:	< 10 %	[ ]	51	0
	10 % to < 50 %	[ ]	52	20
	> 50 %	[ ]	53	30

Code Checked from Section A or B: 21

Total Points Factor 2: 10

NPDES PERMIT RATING WORK SHEET

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one) [ ] BOD [ ] COD [X] Other: NA

Permit Limits: (check one)	Code	Points
[ ] < 100 lbs/day	1	0
[ ] 100 to 1000 lbs/day	2	5
[ ] > 1000 to 3000 lbs/day	3	15
[ ] > 3000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

B. Total Suspended Solids (TSS)

Permit Limits: (check one)	Code	Points
[X] < 100 lbs/day	1	0
[ ] 100 to 1000 lbs/day	2	5
[ ] > 1000 to 5000 lbs/day	3	15
[ ] > 5000 lbs/day	4	20

Code Number Checked: 1

Points Scored: 0

C. Nitrogen Pollutants: (check one) [ ] Ammonia [X] Other: NA

Permit Limits: (check one)	*Nitrogen Equivalent*	Code	Points
[ ]	< 300 lbs/day	1	0
[ ]	300 to 1000 lbs/day	2	5
[ ]	> 1000 to 3000 lbs/day	3	15
[ ]	> 3000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

Total Points Factor 3: 0

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

[ ] YES; (If yes, check toxicity potential number below)

[X] NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the *Human Health* toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
[ ] No process waste streams	0	0	[ ] 3.	3	0	[ ] 7.	7	15
[ ] 1.	1	0	[ ] 4.	4	0	[ ] 8.	8	20
[ ] 2.	2	0	[ ] 5.	5	5	[ ] 9.	9	25
			[ ] 6.	6	10	[ ] 10.	10	30

Code Number Checked: NA

Total Points Factor 4: 0

NPDES PERMIT RATING WORK SHEET

FACTOR 5: Water Quality Factors

A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been to the discharge*

		Code	Points
[X]	YES	1	10
[ ]	NO	2	0

B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

		Code	Points
[X]	YES	1	0
[ ]	NO	2	5

C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

		Code	Points
[ ]	YES	1	10
[X]	NO	2	0

Code Number Checked: A 1 B 1 C 2

Points Factor 5: A 10 + B 0 + C 0 = **10**

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from factor 2) _____

Check appropriate facility HPRI code (from PCS):

	HPRI#	Code	HPRI Score
[ ]	1	1	20
[ ]	2	2	0
[X]	3	3	30
[ ]	4	4	0
[ ]	5	5	20

Enter the multiplication factor that corresponds to the flow code: _____

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked : 3

Base Score (HPRI Score): 30 X (Multiplication Factor) 0.10 = **3**

B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points
[X]	1	10
[ ]	2	0

C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

	Code	Points
[ ]	1	10
[X]	2	0

Code Number Checked: A 3 B 1 C 2

Points Factor 6: A 3 + B 10 + C 0 = **13**

NPDES PERMIT RATING WORK SHEET

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	40
2	Flows / Streamflow Volume	10
3	Conventional Pollutants	0
4	Public Health Impacts	0
5	Water Quality Factors	10
6	Proximity to Near Coastal Waters	13
	TOTAL (Factors 1 through 6)	**73**

S1. Is the total score equal to or grater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

☐ YES; (Add 500 points to the above score and provide reason below:

Reason: _____

NEW SCORE : 73

OLD SCORE : 79

Permit Reviewer's Name : Susan Mackert

Phone Number: (703) 583-3853

Date: July 24, 2015

MATERIALS INVENTORY

Fairfax Terminal Complex
9601 Colonial Avenue
Fairfax, VA 22301

Outfall Number	Company	Tank Number	Capacity (gallons)	Product Stored
001, 101, 901	**BUCKEYE**	1	3,121,524	PBOB
		2	2,541,042	Regular Gasoline
		3	906,444	Regular Gasoline
		4	4,478,628	RBOB
		5	1,603,560	Ethanol
		6	3,047,058	Ultra-Low Sulfur Diesel
		7	10,000	Invigorate
		8	10,000	PCW
		9	10,000	PCW
		10	4,000	Additive (currently not in use)
		11	10,000	Genaric
		12	3,000	Lubricity
		13	7,000	Nemo
		Unnumbered	55+	Various oil storage drums
001, 901	**CITGO**	1	3,184,000	Regular Gasoline
		2	951,000	Ethanol
		3	1,441,000	Regular Gasoline
		4	5,035,000	Ultra-Low Sulfur Diesel
		5	17,430	Slop Oil
		6	2,124,000	Premium Gasoline
		7	3,385,000	Ultra-Low Sulfur Diesel
		8	3,780	Remediation
		9	8,988	Gasoline Additive
		10	4,002	Pourback
		11	2,982	Premium Dist. Additive
		12	546	Red Dye
		14	9,500	Lubricity Additive
001, 102, 103, 901	**TRANSMONTAIGNE**	101	2,440,681	Regular Gasoline
		102	2,440,100	Regular Gasoline
		103	3,429,051	Ultra-Low Sulfur Diesel
		104	2,315,794	Ultra-Low Sulfur Diesel
		105	2,368,648	Premium Gasoline
		106	211,410	Ethanol
		107	16,360	PCW
		108	4,000	Additive
		109	586,484	Ethanol
		110	853,189	Ultra-Low Sulfur Diesel
		111	3,429,936	Regular Gasoline
		112	3,455,284	Regular Gasoline
		113	10,000	Additive
		114	966	Rack Overflow
		115	4,000	Additive
		116	2,000	Ultra-Low Sulfur Diesel (currently not in use)
		117A	1,441	Diesel Additives
		117B	3,008	Diesel Additives
		Unnumbered	200	Heating Fuel Oil
		Unnumbered	500	Heating Fuel Oil (currently not in use)
		Unnumbered	55+	Various oil storage drums
001, 901	**MOTIVA**	NA	NA	NA

Notes:
1. PBOB = Premium blendstock for oxygenate blending
2. RBOB = Reformulated blendstock for oxygenate blending
3. PCW = Petroleum contact water
4. NA = Not applicable

NOTE: This table only includes materials stored on property that drains to the Storm Water Impoundment Basin.

To:	Beth Biller
From:	Rebecca Shoemaker
Date:	April 6, 2015
Subject:	Planning Statement for Joint Basin Corporation
Permit Number:	VA0001872

Information for Outfall 001:

Discharge Type:	Industrial Waste Water and Storm Water
Discharge Flow:	Variable - 0.220 MGD
Receiving Stream:	Daniels Run, UT
Latitude / Longitude:	38°51'02.22 / -77°16'41.81" (Outfall 001)
Rivermile:	0.18
Streamcode:	1-XIV
Waterbody:	VAN-A15R
Water Quality Standards:	Class III, Section 7, special stds. b.
Drainage Area:	<5 sq miles

1. Please provide water quality monitoring information for the receiving stream segment. If there is not monitoring information for the receiving stream segment, please provide information on the nearest downstream monitoring station, including how far downstream the monitoring station is from the outfall.

   This facility discharges to an unnamed tributary to Daniels Run that has not been monitored or assessed. Daniels Run (DAN) is located approximately 0.25 miles downstream from Outfall 001 and is not monitored be DEQ. Accotink Creek (ACO) is located approximately 0.86 miles downstream from Outfall 001; the following is the water quality summary for this segment of Accotink Creek, as taken from the 2012 Integrated Report:

   Class III, Section 7, special stds. b.

   DEQ monitoring stations located in this segment of Accotink Creek:
   - *DEQ ambient water quality monitoring station 1aACO021.28, at Route 237 (Pickett Road), located approximately 0.95 mile downstream from Outfall 001*
   - *DEQ ambient water quality monitoring station 1aACO021.70, at Old Lee Highway, located approximately 1.0 mile downstream from Outfall 001*

   E. coli monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. The wildlife use is considered fully supporting. The fish consumption use was not assessed.

   The aquatic life use was assessed as impaired using DEQ biological monitoring station 1aACO014.57, at Route 620 (located in a downstream segment).

2. Does this facility discharge to a stream segment on the 303(d) list? If yes, please fill out Table A.

   No.

3. Are there any downstream 303(d) listed impairments that are relevant to this discharge? If yes, please fill out Table B.

Table B. Information on Downstream 303(d) Impairments and TMDLs

Waterbody Name	Impaired Use	Cause	Distance From Outfall	TMDL completed	WLA	Basis for WLA	TMDL Schedule
Impairment Information in the 2012 Integrated Report							
Accotink Creek	Recreation	*E. coli*	0.86 miles	Upper Accotink Bacteria TMDL 05/31/2002	---	---	---
	Aquatic Life	Benthic Macroinvertebrates		---	---	---	2022
Lake Accotink	Fish Consumption	Mercury	9.1 miles	---	---	---	2022
		PCBs		---	---	---	2022

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

There is a completed downstream TMDL for the aquatic life use impairment for the Chesapeake Bay. However, the Bay TMDL and the WLAs contained within the TMDL are not addressed in this planning statement.

DEQ planning staff requests the facility perform quarterly nutrient monitoring, specifically total phosphorus, nitrate, nitrite, ammonia, and TKN. Nutrient monitoring is requested of facilities that are located within a 5 mile distance upstream of a benthic impairment.

Lake Accotink, which is located approximately 9.1 miles downstream from Outfall 001, is listed with a PCB impairment. In support of the PCB TMDL that is scheduled for development by 2022, this industrial facility is a candidate for PCB monitoring. The SIC code for this facility (5171) is not specifically identified in the PCB Monitoring Guidance (09-2001) as a facility type that is subject to PCB monitoring, however the guidance allows other industrial facilities to be identified for monitoring based on additional information or staff recommendations. Total PCB results have been generated from sampling conducted at VPDES permitted facilities statewide since 2009. PCB data from Petroleum Bulk Station and Terminal facilities (5171) indicate that effluent from these facilities has potential to contain PCBs in concentrations greater than the Virginia water quality criteria (640 pg/L). Based on this information, DEQ staff recommends that this facility perform low-level PCB monitoring during the upcoming permit cycle. It is recommended that this facility collect two samples using EPA Method 1668, which is capable of detecting low-level concentrations for all 209 PCB congeners. PCB data generated using Method 1668 revisions A, B, and C are acceptable; however, data generated using version A is preferred.

5. Fact Sheet Requirements – Please provide information regarding any drinking water intakes located within a 5 mile radius of the discharge point.

There are no public water supply intakes located within five miles of this discharge.

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Joint Basin - Fairfax Terminal Permit No.: VA0001872

Receiving Stream: Daniels Run, UT Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information		Stream Flows		Mixing Information		Effluent Information	
Mean Hardness (as CaCO3) =	mg/L	1Q10 (Annual) =	0 MGD	Annual - 1Q10 Mix =	100 %	Mean Hardness (as CaCO3) =	23 mg/L
90% Temperature (Annual) =	deg C	7Q10 (Annual) =	0 MGD	- 7Q10 Mix =	100 %	90% Temp (Annual) =	25 deg C
90% Temperature (Wet season) =	deg C	30Q10 (Annual) =	0 MGD	- 30Q10 Mix =	100 %	90% Temp (Wet season) =	deg C
90% Maximum pH =	SU	1Q10 (Wet season) =	0 MGD	Wet Season - 1Q10 Mix =	100 %	90% Maximum pH =	8 SU
10% Maximum pH =	SU	30Q10 (Wet season)	0 MGD	- 30Q10 Mix =	100 %	10% Maximum pH =	SU
Tier Designation (1 or 2) =	1	30Q5 =	0 MGD			Discharge Flow =	0.1 MGD
Public Water Supply (PWS) Y/N? =	n	Harmonic Mean =	0 MGD				
Trout Present Y/N? =	n						
Early Life Stages Present Y/N? =	y						

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenapthene	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	--	--	--	--	--	--	--	--	na	9.3E+00
Acrylonitrile [C]	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	--	--	--	--	--	--	--	--	na	2.5E+00
Aldrin [C]	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	--	--	--	--	--	--	--	--	3.0E+00	--	na	5.0E-04
Ammonia-N (mg/l) (Yearly)	0	8.41E+00	1.24E+00	na	--	8.41E+00	1.24E+00	na	--	--	--	--	--	--	--	--	--	8.41E+00	1.24E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	8.41E+00	2.43E+00	na	--	8.41E+00	2.43E+00	na	--	--	--	--	--	--	--	--	--	8.41E+00	2.43E+00	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	--	--	--	--	--	--	--	--	na	4.0E+04
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	--	--	--	--	--	--	--	--	na	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene [C]	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	--	--	--	--	--	--	--	--	na	5.1E+02
Benzidine [C]	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	--	--	--	--	--	--	--	--	na	2.0E-03
Benzo (a) anthracene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (b) fluoranthene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (k) fluoranthene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (a) pyrene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Bis2-Chloroethyl Ether [C]	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	--	--	--	--	--	--	--	--	na	5.3E+00
Bis2-Chloroisopropyl Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	--	--	--	--	--	--	--	--	na	6.5E+04
Bis 2-Ethylhexyl Phthalate [C]	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	--	--	--	--	--	--	--	--	na	2.2E+01
Bromoform [C]	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	--	--	--	--	--	--	--	--	na	1.4E+03
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
Cadmium	0	8.2E-01	3.8E-01	na	--	8.2E-01	3.8E-01	na	--	--	--	--	--	--	--	--	--	8.2E-01	3.8E-01	na	--
Carbon Tetrachloride [C]	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	--	--	--	--	--	--	--	--	na	1.6E+01
Chlordane [C]	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	8.1E-03
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Chlorodibromomethane[C]	0	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	--	--	--	--	--	--	--	--	na	**1.3E+02**
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	--	--	na	**1.1E+04**
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	**1.6E+03**
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	**1.5E+02**
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	**8.3E-02**	**4.1E-02**	na	--
Chromium III	0	1.8E+02	2.4E+01	na	--	1.8E+02	2.4E+01	na	--	--	--	--	--	--	--	--	--	**1.8E+02**	**2.4E+01**	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	**1.6E+01**	**1.1E+01**	na	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene [C]	0	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	--	--	--	--	--	--	--	--	na	**1.8E-02**
Copper	0	3.6E+00	2.7E+00	na	--	3.6E+00	2.7E+00	na	--	--	--	--	--	--	--	--	--	**3.6E+00**	**2.7E+00**	na	--
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	--	--	--	--	--	--	--	--	**2.2E+01**	**5.2E+00**	na	**1.6E+04**
DDD [C]	0	--	--	na	3.1E-03	--	--	na	3.1E-03	--	--	--	--	--	--	--	--	--	--	na	**3.1E-03**
DDE [C]	0	--	--	na	2.2E-03	--	--	na	2.2E-03	--	--	--	--	--	--	--	--	--	--	na	**2.2E-03**
DDT [C]	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	--	--	--	--	--	--	--	--	**1.1E+00**	**1.0E-03**	na	**2.2E-03**
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	**1.0E-01**	na	--
Diazinon	0	1.7E-01	1.7E-01	na	--	1.7E-01	1.7E-01	na	--	--	--	--	--	--	--	--	--	**1.7E-01**	**1.7E-01**	na	--
Dibenz(a,h)anthracene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	**1.8E-01**
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	--	--	na	**1.3E+03**
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	--	--	--	--	--	--	--	--	na	**9.6E+02**
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	--	--	--	--	--	--	--	--	na	**1.9E+02**
3,3-Dichlorobenzidine[C]	0	--	--	na	2.8E-01	--	--	na	2.8E-01	--	--	--	--	--	--	--	--	--	--	na	**2.8E-01**
Dichlorobromomethane [C]	0	--	--	na	1.7E+02	--	--	na	1.7E+02	--	--	--	--	--	--	--	--	--	--	na	**1.7E+02**
1,2-Dichloroethane [C]	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	**3.7E+02**
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	7.1E+03	--	--	--	--	--	--	--	--	--	--	na	**7.1E+03**
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.0E+04	--	--	--	--	--	--	--	--	--	--	na	**1.0E+04**
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	2.9E+02	--	--	--	--	--	--	--	--	--	--	na	**2.9E+02**
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane[C]	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	**1.5E+02**
1,3-Dichloropropene [C]	0	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	--	--	--	--	--	--	--	--	na	**2.1E+02**
Dieldrin [C]	0	2.4E-01	5.6E-02	na	5.4E-04	2.4E-01	5.6E-02	na	5.4E-04	--	--	--	--	--	--	--	--	**2.4E-01**	**5.6E-02**	na	**5.4E-04**
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	4.4E+04	--	--	--	--	--	--	--	--	--	--	na	**4.4E+04**
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	8.5E+02	--	--	--	--	--	--	--	--	--	--	na	**8.5E+02**
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.1E+06	--	--	--	--	--	--	--	--	--	--	na	**1.1E+06**
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	4.5E+03	--	--	--	--	--	--	--	--	--	--	na	**4.5E+03**
2,4 Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	**5.3E+03**
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	2.8E+02	--	--	--	--	--	--	--	--	--	--	na	**2.8E+02**
2,4-Dinitrotoluene [C]	0	--	--	na	3.4E+01	--	--	na	3.4E+01	--	--	--	--	--	--	--	--	--	--	na	**3.4E+01**
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	5.1E-08	--	--	--	--	--	--	--	--	--	--	na	**5.1E-08**
1,2-Diphenylhydrazine[C]	0	--	--	na	2.0E+00	--	--	na	2.0E+00	--	--	--	--	--	--	--	--	--	--	na	**2.0E+00**
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	**2.2E-01**	**5.6E-02**	na	**8.9E+01**
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	**2.2E-01**	**5.6E-02**	na	**8.9E+01**
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	--	--	--	--	--	--	--	--	**2.2E-01**	**5.6E-02**	--	--
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	**8.9E+01**
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	8.6E-02	3.6E-02	na	6.0E-02	--	--	--	--	--	--	--	--	**8.6E-02**	**3.6E-02**	na	**6.0E-02**
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	3.0E-01	--	--	--	--	--	--	--	--	--	--	na	**3.0E-01**

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	--	--	--	--	--	--	--	--	na	2.1E+03
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	--	--	--	--	--	--	--	--	na	1.4E+02
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor [C]	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	7.9E-04
Heptachlor Epoxide[C]	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	3.9E-04
Hexachlorobenzene[C]	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	--	--	--	--	--	--	--	--	na	2.9E-03
Hexachlorobutadiene[C]	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	--	--	--	--	--	--	--	--	na	1.8E+02
Hexachlorocyclohexane Alpha-BHC[C]	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	na	4.9E-02
Hexachlorocyclohexane Beta-BHC[C]	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	--	--	--	--	--	--	--	--	na	1.7E-01
Hexachlorocyclohexane Gamma-BHC[C] (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	na	1.8E+00
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	--	--	--	--	--	--	--	--	na	1.1E+03
Hexachloroethane[C]	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone[C]	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	--	--	--	--	--	--	--	--	na	9.6E+03
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	2.0E+01	2.3E+00	na	--	2.0E+01	2.3E+00	na	--	--	--	--	--	--	--	--	--	2.0E+01	2.3E+00	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
Methylene Chloride [C]	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	--	--	--	--	--	--	--	--	na	5.9E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Nickel	0	5.6E+01	6.3E+00	na	4.6E+03	5.6E+01	6.3E+00	na	4.6E+03	--	--	--	--	--	--	--	--	5.6E+01	6.3E+00	na	4.6E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	--	--	--	--	--	--	--	--	na	6.9E+02
N-Nitrosodimethylamine[C]	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	--	--	--	--	--	--	--	--	na	3.0E+01
N-Nitrosodiphenylamine[C]	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	na	6.0E+01
N-Nitrosodi-n-propylamine[C]	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	--	--	--	--	--	--	--	--	na	5.1E+00
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB Total[C]	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	--	--	--	--	--	--	--	--	1.4E-02	na	6.4E-04
Pentachlorophenol [C]	0	7.7E-03	5.9E-03	na	3.0E+01	7.7E-03	5.9E-03	na	3.0E+01	--	--	--	--	--	--	--	--	7.7E-03	5.9E-03	na	3.0E+01
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	--	--	--	--	--	--	--	--	na	8.6E+05
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Radionuclides	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.0E+01	5.0E+00	na	4.2E+03	--	--	--	--	--	--	--	--	**2.0E+01**	**5.0E+00**	**na**	**4.2E+03**
Silver	0	3.2E-01	--	na	--	3.2E-01	--	na	--	--	--	--	--	--	--	--	--	**3.2E-01**	**--**	**na**	**--**
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
1,1,2,2-Tetrachloroethane[C]	0	--	--	na	4.0E+01	--	--	na	4.0E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.0E+01**
Tetrachloroethylene[C]	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.3E+01**
Thallium	0	--	--	na	4.7E-01	--	--	na	4.7E-01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.7E-01**
Toluene	0	--	--	na	6.0E+03	--	--	na	6.0E+03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**6.0E+03**
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Toxaphene [C]	0	7.3E-01	2.0E-04	na	2.8E-03	7.3E-01	2.0E-04	na	2.8E-03	--	--	--	--	--	--	--	--	**7.3E-01**	**2.0E-04**	**na**	**2.8E-03**
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.6E-01	7.2E-02	na	--	--	--	--	--	--	--	--	--	**4.6E-01**	**7.2E-02**	**na**	**--**
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	7.0E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**7.0E+01**
1,1,2-Trichloroethane[C]	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.6E+02**
Trichloroethylene [C]	0	--	--	na	3.0E+02	--	--	na	3.0E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.0E+02**
2,4,6-Trichlorophenol [C]	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.4E+01**
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Vinyl Chloride[C]	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.4E+01**
Zinc	0	3.6E+01	3.6E+01	na	2.6E+04	3.6E+01	3.6E+01	na	2.6E+04	--	--	--	--	--	--	--	--	**3.6E+01**	**3.6E+01**	**na**	**2.6E+04**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
   Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	6.4E+02
Arsenic	9.0E+01
Barium	na
Cadmium	2.3E-01
Chromium III	1.4E+01
Chromium VI	6.4E+00
Copper	1.5E+00
Iron	na
Lead	1.4E+00
Manganese	na
Mercury	4.6E-01
Nickel	3.8E+00
Selenium	3.0E+00
Silver	1.3E-01
Zinc	1.4E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

7/28/2015 12:59:32 PM

Facility = Joint Basin - Fairfax Terminal
Chemical = Copper
Chronic averaging period = 30
WLAa = 3.6
WLAc = 2.7
Q.L. = 1.5
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 2.2
Variance = 1.7424
C.V. = 0.6
97th percentile daily values = 5.35351
97th percentile 4 day average = 3.66033
97th percentile 30 day average= 2.65331
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity
Maximum Daily Limit = 3.6
Average Weekly limit = 3.6
Average Monthly LImit = 3.6

The data are:

2.2

7/28/2015 1:00:41 PM

Facility = Joint Basin - Fairfax Terminal
Chemical = Lead
Chronic averaging period = 30
WLAa = 20
WLAc = 2.3
Q.L. = 0.5
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value =
Variance =
C.V. =
97th percentile daily values =
97th percentile 4 day average = 3.66033
97th percentile 30 day average= 2.65331
< Q.L. = 1
Model used =

No Limit is required for this material

The data are:

0.33

7/28/2015 1:01:28 PM

Facility = Joint Basin - Fairfax Terminal
Chemical = Nickel
Chronic averaging period = 30
WLAa = 56
WLAc = 6.3
Q.L. = 0.5
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 2
Variance = 1.44
C.V. = 0.6
97th percentile daily values = 4.86683
97th percentile 4 day average = 3.32758
97th percentile 30 day average= 2.41210
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

2

7/28/2015 1:02:07 PM

Facility = Joint Basin - Fairfax Terminal
Chemical = Zinc
Chronic averaging period = 30
WLAa = 36
WLAc = 36
Q.L. = 2.0
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 14
Variance = 70.56
C.V. = 0.6
97th percentile daily values = 34.0678
97th percentile 4 day average = 23.2930
97th percentile 30 day average= 16.8847
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

14

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
Northern Regional Office
13901 Crown Court Woodbridge, VA 22193 (703) 583-3800

SUBJECT: TOXICS MANAGEMENT PROGRAM (TMP) DATA REVIEW
BP Amoco/Fairfax Terminal – Joint Basin (VA0001872)
REVIEWER: Douglas Frasier
DATE: 16 January 2014

PREVIOUS REVIEW: 18 June 2012

DATA REVIEWED:

This review covers the fourth (4th) annual chronic toxicity tests conducted in December 2013 at Outfall 001.

DISCUSSION:

The results of these toxicity tests, along with the results of all previous toxicity tests conducted on effluent samples collected from Outfall 001, are summarized in Table 1.

The chronic toxicity of the effluent samples was determined with a 3-brood static daily renewal survival and reproduction chronic test using *C. dubia* and a 7-day daily renewal survival and growth test using *P. promelas*. These tests were performed using 24-hour flow-proportioned composite samples of effluent.

Statistical analyses of the test results yielded a No Observed Effect Concentration (NOEC) of 25% effluent for *C. dubia* and 12.5% effluent for *P. promelas*; equivalent to a TU_c of 4 and 8, respectively.

CONCLUSION:

The chronic toxicity tests are valid and the test results acceptable. The test results indicate that the effluent from Outfall 001 may exhibit chronic toxicity to the test species *C. dubia* or *P. promelas*.

BIOMONITORING RESULTS
Fairfax Terminal Complex (VA0001872)

Table 1
Summary of Toxicity Test Results for Outfall 001

TEST DATE	TEST TYPE/ORGANISM	IC_{25} (%)	48-hr LC_{50} (%)	NOAEC/ NOEC (%)	% SURV	TU_a	TU_c	LAB	REMARKS
11/19/94	Acute *P. promelas*		>100		100				A-1
11/16/94	Chronic *P. promelas*			100 SG	100				Q-1
11/16/94	Chronic *C. dubia*			100 SR	100				
02/07/95	Chronic *P. promelas*			100 SG	98				Q-2
02/07/95	Chronic *C. dubia*			100 SR	100				
05/09/95	Chronic *P. promelas*			100 SG	90				Q-3
05/09/95	Chronic *C. dubia*			100 SR	100				
08/08/95	Chronic *P. promelas*			**50 SG**	85				Q-4
08/08/95	Chronic *C. dubia*			**50 SR**	20				
11/09/95	Acute *P. promelas*		>100		95				A-2 (acute)
11/07/95	Chronic *C. dubia*			100 SR	100				A-1(chronic)
11/07/96	Acute *P. promelas*		>100		100				A-3 (acute)
11/05/96	Chronic *C. dubia*			100 SR	90				A-2(chronic)
11/15/97	Acute *P. promelas*		INV						A-4 (acute)
11/13/97	Chronic *C. dubia*			INV					A-3(chronic)
07/28/98	Acute *P. promelas*		>100		100				retest
07/25/98	Chronic *C. dubia*			100 SR	80				retest
Permit Reissued November 28, 1999									
03/23/00	Acute *P. promelas*		>100		100	<1			1st annual
03/21/00	Chronic *C. dubia*			100 SR	100		1		
03/21/00	Chronic *P. promelas*			100 SG	98		1		
04/19/01	Acute *P. promelas*		>100		100	<1			2nd annual
04/17/01	Chronic *C. dubia*	>100	>100	100 SR	100		1		
04/17/01	Chronic *P. promelas*	>100	>100	100 SG	93		1		
04/04/02	Acute *P. promelas*		>100		100	<1			3rd annual
04/02/02	Chronic *C. dubia*	>100	>100	100 SR	80		1		
04/02/02	Chronic *P. promelas*	23.7	>100	**25 S 12.5 G**	55		8		
06/25/02	Chronic *P. promelas*			**Invalid**					1st Retest
10/08/02	Chronic *P. promelas*	>100	>100	100 SG	90		1		2nd Retest
05/21/03	Acute *P. promelas*		>100		100	<1			4th annual
05/20/03	Chronic *C. dubia*	>100	>100	100 SR	100		1		
05/20/03	Chronic *P. promelas*	2.1	>100	**6.25 S <6.25 G**	23		**>16**		
08/26/03#	Chronic *P. promelas*	>100	>100	100 SG	98		1		Retest
05/19/04	Acute *P. promelas*		>100		100	<1			5th annual
05/18/04	Chronic *C. dubia*	>100	>100	100 SR	90		1		
05/18/04#	Chronic *P. promelas*	>100	>100	100 SG	95		1		
Permit Reissued December 29, 2004									
05/11/05	Acute *C. dubia*		>100	100	100	1			1st annual
05/10/05	Chronic *C. dubia*	>100	>100	100	90		1		
05/10/05	Chronic *P. promelas*	>100	>100	100	95		1		
07/11/06	Acute *C. dubia*		>100	100	100	1			2nd annual
07/10/06	Chronic *C. dubia*	>100	>100	100 SR	90		1		

TEST DATE	TEST TYPE/ORGANISM	IC_{25} (%)	48-hr LC_{50} (%)	NOAEC /NOEC (%)	% SURV	TU_c	TU_a	LAB	REMARKS
07/10/06#	Chronic *P. promelas*	>100	>100	100 SG	88		1		
05/15/07	Acute *C. dubia*		>100	100	100	1			3rd annual
05/14/07	Chronic *C. dubia*	>100	>100	100 SR	90		1		
05/14/07#	Chronic *P. promelas*	>100	>100	100 SG	90		1		
05/21/08	Acute *C. dubia*		>100	100	100	1			4th annual
05/20/08	Chronic *C. dubia*	>100	>100	100 SR	80		1		
05/20/08#	Chronic *P. promelas*	>100	>100	100 SG	93		1		
06/24/09	Acute *C. dubia*		>100	100	100	1			5th annual
06/23/09	Chronic *C. dubia*	>100	>100	100 SR	100		1		
06/23/09	Chronic *P. promelas*	>100	>100	100 S **50 G**	95		2		
06/23/09#	Chronic *P. promelas*	>100	>100	100 S **50 G**	95		2		
Permit Reissued 29 December 2009									
05/25/10	Chronic *C. dubia*	>100	>100	100 SR	100		1	CBI	1st Annual
05/25/10	Chronic *P. promelas*	>100	>100	100 SG	100		1		
05/25/10#	Chronic *P. promelas*	>100	>100	100 SG	98		1		
06/14/11	Chronic *C. dubia*	>100	>100	100 SR	100		1	JRA	2nd Annual
06/14/11	Chronic *P. promelas*	>100	>100	100 SG	100		1		
05/08/12	Chronic *C. dubia*	8.37	>100	100 S **6.25 R**	90		16	JRA	3rd Annual
05/08/12	Chronic *P. promelas*	>100	>100	100 S **25 G**	92.5		4		
12/12/13	Chronic *C. dubia*	47.8	>100	100 S **25 R**	100		4	CBI	4th Annual
12/12/13	Chronic *P. promelas*	>100	>100	100 S **12.5 G**	90		8		

FOOTNOTES:

A boldfaced LC_{50} or NOEC value indicates that the test failed the criteria.
LC50 based on observation at the end of 48 hours.
denoted that the test samples were pretreated with UV light to guard against fish pathogen interference.

ABBREVIATIONS:

S – Survival; R – Reproduction; G – Growth
INV – Invalid test
% SURV – Percent survival in 100% effluent
CBI – Coastal Bioanalysts, Incorporated
JRA – James R. Reed & Associates

Spreadsheet for determination of WET test endpoints or WET limits

Excel 97
Revision Date: 12/13/13
File: WETLIM10.xls
(MIX.EXE required also)

Enter data in the cells with blue type:

Entry Date:	09/29/14
Facility Name:	Joint Basin
VPDES Number:	VA0001872
Outfall Number:	1
Plant Flow:	0.22 MGD
Acute 1Q10:	0 MGD
Chronic 7Q10:	0 MGD

Are data available to calculate CV? (Y/N) N (Minimum of 10 data points, same species, needed) Go to Page 2
Are data available to calculate ACR? (Y/N) N (NOEC<LC50, do not use greater/less than data) Go to Page 3

Acute Endpoint/Permit Limit — Use as LC_{50} in Special Condition, as TUa on DMR

ACUTE 100% = NOAEC LC_{50} = NA % Use as NA TUa

ACUTE WLAa 0.3

Note: Inform the permittee that if the mean of the data exceeds this TUa: 1.0 a limit may result using STATS.EXE

Chronic Endpoint/Permit Limit — Use as NOEC in Special Condition, as TUc on DMR

CHRONIC	1.46257468	TU_c	NOEC =	69	% Use as	1.44 TU_c
BOTH*	3.00000007	TU_c	NOEC =	34	% Use as	2.94 TU_c
AML	1.46257468	TU_c	NOEC =	69	% Use as	1.44 TU_c

ACUTE WLAa,c 3
CHRONIC WLAc 1
* Both means acute expressed as chronic

Note: Inform the permittee that if the mean of the data exceeds this TUc: 1.0 a limit may result using STATS.EXE

% Flow to be used from MIX.EXE

Diffuser /modeling study? Enter Y/N n

Acute 100 % 1 :1
Chronic 100 % 1 :1

NOTE: If the IWCa is >33%, specify the NOAEC = 100% test/endpoint for use

IWC_a	100 %	Plant flow/plant flow + 1Q10	
IWC_c	100 %	Plant flow/plant flow + 7Q10	
Dilution, acute	1	100/IWCa	
Dilution, chronic	1	100/IWCc	
WLA_a	0.3	Instream criterion (0.3 TUa) X's Dilution, acute	
WLA_c	1	Instream criterion (1.0 TUc) X's Dilution, chronic	
$WLA_{a,c}$	3	ACR X's WLA_a - converts acute WLA to chronic units	
ACR -acute/chronic ratio	10	LC50/NOEC (Default is 10 - if data are available, use tables Page 3)	
CV-Coefficient of variation	0.6	Default of 0.6 - if data are available, use tables Page 2)	
Constants eA	0.4109447	Default = 0.41	
eB	0.6010373	Default = 0.60	
eC	2.4334175	Default = 2.43	
eD	2.4334175	Default = 2.43 (1 samp)	No. of samples: 1

**The Maximum Daily Limit is calculated from the lowest LTA, X's eC. The LTAa,c and MDL using it are driven by the ACR.

$LTA_{a,c}$	1.2328341	WLAa,c X's eA			
LTA_c	0.6010373	WLAc X's eB			
MDL** with $LTA_{a,c}$	3.000000074	TU_a	NOEC = 33.333333	(Protects from acute/chronic toxicity)	
MDL** with LTA_c	1.462574684	TU_c	NOEC = 68.372577	(Protects from chronic toxicity)	
AML with lowest LTA	1.462574684	TU_c	NOEC = 68.372577	Lowest LTA X's eD	

Rounded NOEC's %
NOEC = 34 %
NOEC = 69 %
NOEC = 69

IF ONLY ACUTE ENDPOINT/LIMIT IS NEEDED, CONVERT MDL FROM TU_c to TU_a

Rounded LC50's %

MDL with $LTA_{a,c}$	0.300000007	TU_a	LC50 = 333.333325	%	Use NOAEC=100%	LC50 = NA %
MDL with LTA_c	0.146257468	TU_a	LC50 = 683.725769	%	Use NOAEC=100%	LC50 = NA

Page 2 - Follow the directions to develop a site specific CV (coefficient of variation)

IF YOU HAVE AT LEAST 10 DATA POINTS THAT ARE QUANTIFIABLE (NOT "<" OR ">") FOR A SPECIES, ENTER THE DATA IN EITHER COLUMN "G" (VERTEBRATE) OR COLUMN "J" (INVERTEBRATE). THE 'CV' WILL BE PICKED UP FOR THE CALCULATIONS BELOW. THE DEFAULT VALUES FOR eA, eB, AND eC WILL CHANGE IF THE 'CV' IS ANYTHING OTHER THAN 0.6.

	Vertebrate IC_{25} Data or LC_{50} Data	LN of data		Invertebrate IC_{25} Data or LC_{50} Data	LN of data
	**********			**********	
1			1		
2			2		
3			3		
4			4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		
16			16		
17			17		
18			18		
19			19		
20			20		
St Dev	NEED DATA	NEED DATA	St Dev	NEED DATA	NEED DATA
Mean	0	0	Mean	0	0
Variance	0	0.000000	Variance	0	0.000000
CV	0		CV	0	

Coefficient of Variation for effluent tests

CV = 0.6 (Default 0.6)

δ^2 = 0.3074847

δ = 0.554513029

Using the log variance to develop eA
(P. 100, step 2a of TSD)

Z = 1.881 (97% probability stat from table

A = -0.88929666

eA = 0.410944686

Using the log variance to develop eB
(P. 100, step 2b of TSD)

δ_4^2 = 0.086177696

δ_4 = 0.293560379

B = -0.50909823

eB = 0.601037335

Using the log variance to develop eC
(P. 100, step 4a of TSD)

δ^2 = 0.3074847

δ = 0.554513029

C = 0.889296658

eC = 2.433417525

Using the log variance to develop eD
(P. 100, step 4b of TSD)

n = 1 This number will most likely stay as "1", for 1 sample/month.

δ_n^2 = 0.3074847

δ_n = 0.554513029

D = 0.889296658

eD = 2.433417525

Page 3 - Follow directions to develop a site specific ACR (Acute to Chronic Ratio)

To determine Acute/Chronic Ratio (ACR), insert usable data below. Usable data is defined as valid paired test results, acute and chronic, tested at the same temperature, same species. The chronic NOEC must be less than the acute LC_{50}, since the ACR divides the LC_{50} by the NOEC. LC_{50}'s >100% should not be used.

Table 1. ACR using Vertebrate data

Set #	LC_{50}	NOEC	Test ACR	Logarithm	Geomean	Antilog	ACR to Use
1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA

ACR for vertebrate data: 0

Table 1. Result: Vertebrate ACR 0

Table 2. Result: Invertebrate ACR 0

Lowest ACR: Default to 10

Table 2. ACR using Invertebrate data

Set #	LC_{50}	NOEC	Test ACR	Logarithm	Geomean	Antilog	ACR to Use
1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
2	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
4	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
9	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA
10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	NO DATA

ACR for vertebrate data: 0

DILUTION SERIES TO RECOMMEND

Table 4.	Monitoring % Effluent	Monitoring TUc	Limit % Effluent	Limit TUc
Dilution series based on data mean	100	1.0		
Dilution series to use for limit			69	1.4492754
Dilution factor to recommend:	0.5		0.8306624	
Dilution series to recommend:	100.0	1.00	100.0	1.00
	50.0	2.00	83.1	1.20
	25.0	4.00	69.0	1.45
	12.5	8.00	57.3	1.74
	6.25	16.00	47.6	2.10
Extra dilutions if needed	3.12	32.05	39.5	2.53
	1.56	64.10	32.9	3.04

Convert LC_{50}'s and NOEC's to Chronic TU's

for use in WLA.EXE

Table 3. ACR used: 10

	Enter LC_{50}	TUc	Enter NOEC	TUc
1		NO DATA		NO DATA
2		NO DATA		NO DATA
3		NO DATA		NO DATA
4		NO DATA		NO DATA
5		NO DATA		NO DATA
6		NO DATA		NO DATA
7		NO DATA		NO DATA
8		NO DATA		NO DATA
9		NO DATA		NO DATA
10		NO DATA		NO DATA
11		NO DATA		NO DATA
12		NO DATA		NO DATA
13		NO DATA		NO DATA
14		NO DATA		NO DATA
15		NO DATA		NO DATA
16		NO DATA		NO DATA
17		NO DATA		NO DATA
18		NO DATA		NO DATA
19		NO DATA		NO DATA
20		NO DATA		NO DATA

If WLA.EXE determines that an acute limit is needed, you need to convert the TUc answer you get to TUa and then an LC50, enter it here: NO DATA $\%LC_{50}$ NO DATA TUa

Cell: I9
Comment:
This is assuming that the data are Type 2 data (none of the data in the data set are censored - "<" or ">").

Cell: K18
Comment: This is assuming that the data are Type 2 data (none of the data in the data set are censored - "<" or ">").

Cell: J22
Comment: Remember to change the "N" to "Y" if you have ratios entered, otherwise, they won't be used in the calculations.

Cell: C40
Comment:
If you have entered data to calculate an ACR on page 3, and this is still defaulted to "10", make sure you have selected "Y" in cell E21

Cell: C41
Comment: If you have entered data to calculate an effluent specific CV on page 2, and this is still defaulted to "0.6", make sure you have selected "Y" in cell E20

Cell: L48
Comment:
See Row 151 for the appropriate dilution series to use for these NOEC's

Cell: G62
Comment:
Vertebrates are:
Pimephales promelas
Oncorhynchus mykiss
Cyprinodon variegatus

Cell: J62
Comment:
Invertebrates are:
Ceriodaphnia dubia
Mysidopsis bahia

Cell: C117
Comment: Vertebrates are:

Pimephales promelas
Cyprinodon variegatus

Cell: M119
Comment: The ACR has been picked up from cell C34 on Page 1. If you have paired data to calculate an ACR, enter it in the tables to the left, and make sure you have a "Y" in cell E21 on Page 1. Otherwise, the default of 10 will be used to convert your acute data.

Cell: M121
Comment: If you are only concerned with acute data, you can enter it in the NOEC column for conversion and the number calculated will be equivalent to the TUa. The calculation is the same: 100/NOEC = TUc or 100/LC50 = TUa.

Cell: C138
Comment: Invertebrates are:

Ceriodaphnia dubia
Mysidopsis bahia

9/4/2015 2:29:49 PM

Facility = Fairfax Terminal Complex - Joint Basin
Chemical = C. dubia
Chronic averaging period = 4
WLAa = 3
WLAc = 1
Q.L. = 1
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 4
Expected Value = 5.5
Variance = 10.89
C.V. = 0.6
97th percentile daily values = 13.3837
97th percentile 4 day average = 9.15084
97th percentile 30 day average= 6.63329
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 1.46257478405323
Average Weekly limit = 1.46257478405323
Average Monthly LImit = 1.46257478405323

The data are:

1
1
16
4

9/4/2015 2:30:18 PM

Facility = Fairfax Terminal Complex - Joint Basin
Chemical = P. promelas
Chronic averaging period = 4
WLAa = 3
WLAc = 1
Q.L. = 1
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 4
Expected Value = 3.5
Variance = 4.41
C.V. = 0.6
97th percentile daily values = 8.51696
97th percentile 4 day average = 5.82326
97th percentile 30 day average= 4.22118
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 1.46257478405323
Average Weekly limit = 1.46257478405323
Average Monthly LImit = 1.46257478405323

The data are:

1
1
4
8

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated industrial wastewater and industrial stormwater into a water body in Fairfax County, Virginia.

PUBLIC COMMENT PERIOD: October 3, 2015 to November 2, 2015

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Industrial Wastewater and Industrial Stormwater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Joint Basin Corporation, 9601 Colonial Avenue, Fairfax, VA 22031, VA0001872

NAME AND ADDRESS OF FACILITY: Fairfax Terminal Complex, 9601 Colonial Avenue, Fairfax, VA 22031

PROJECT DESCRIPTION: Joint Basin Corporation has applied for a reissuance of a permit for the private Fairfax Terminal. The applicant proposes to release treated industrial wastewater and industrial stormwater at a rate of 0.22 million gallons per day into a water body. The facility proposes to release the treated industrial wastewater and industrial stormwater in an unnamed tributary to Daniels Run in Fairfax County in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, Total Suspended Solids, Total Petroleum Hydrocarbons, Benzene, Ethylbenzene, Toluene, Total Xylenes, MTBE, and Naphthalene. The permit will monitor the following pollutants to protect water quality: Total Nitrogen, Total Kjeldahl Nitrogen, Nitrate+Nitrate, Total Phosphorus, Dissolved Copper, Dissolved Lead, Dissolved Nickel, Dissolved Zinc, Total Hardness, and Chronic Toxicity.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by hand-delivery, e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the draft permit and application at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.
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